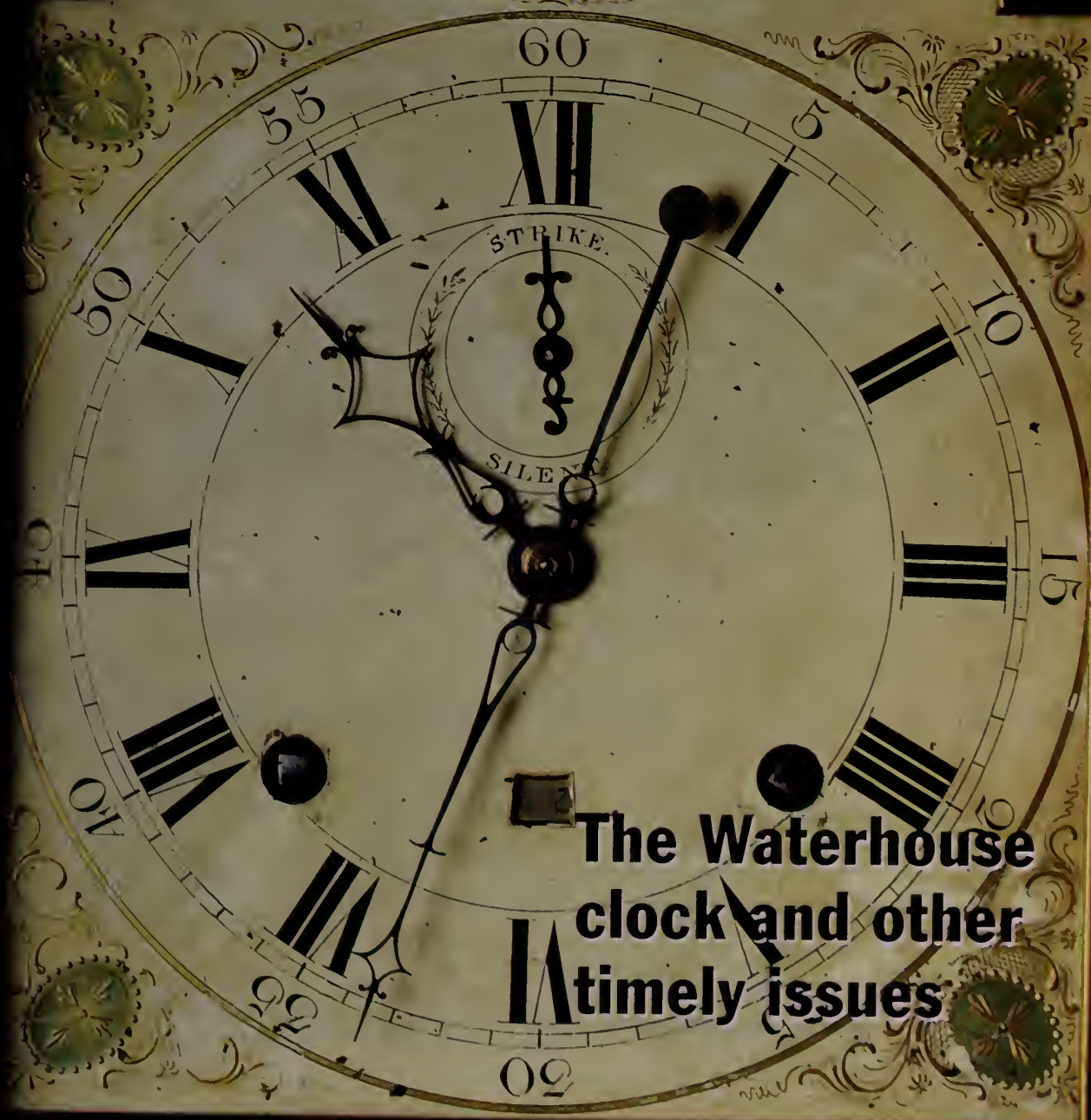
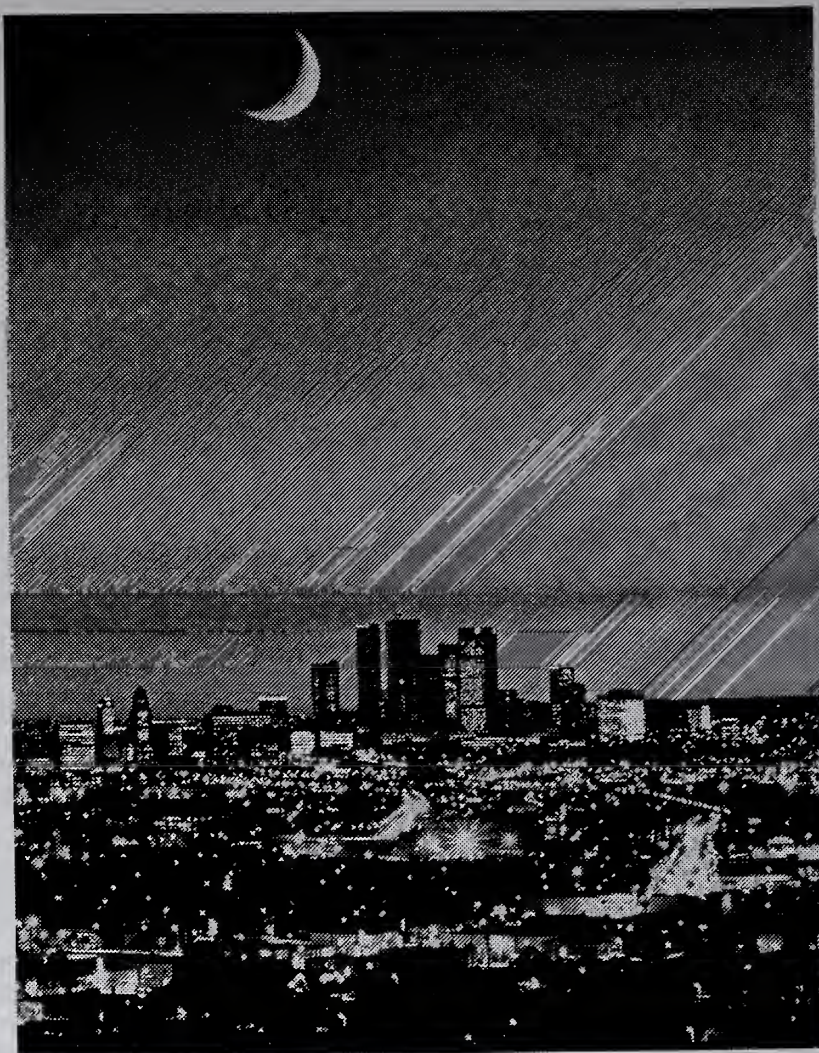


Harvard Medical

ALUMNI BULLETIN WINTER 1992/93



**The Waterhouse
clock and other
timely issues**



More people have survived
cancer than now live in the
City of Los Angeles.
We are winning.



Please support the
AMERICAN CANCER SOCIETY®

Harvard Medical

A L U M N I B U L L E T I N



Cover photo of Waterhouse clock
by Stuart Darsch.

12 Feast Day for Armenia

by Ellen Barlow

Disturbed by women's health care in Armenia, the alumni office's Nora Nercessian rallies HMS faculty to found a clinic.

18 Politics, Patents and the Public Good

by Bernadine P. Healy

The NIH in the era of molecular medicine.

24 The Tuskegee Legacy

by Ruth L. Fischbach

The study in perspective.

29 Miss Evers' Boys

by David Feldshub

Excerpts from a play, which dramatizes the events of the Tuskegee Syphilis Study.

38 Breaking the Glass Ceiling

by Frances K. Couley

One woman's views on what it takes to be an equal player.

Engendering Gender Awareness at HMS

by Terri L. Rutter

45 A Mystery Unwound

by Oglesby Paul and Richard Wolfe

Who is the true maker of the Waterhouse clock?

48 The Janeways in Iran

by Robert J. Haggerty and

Frederick H. Lovejoy Jr.

Promoting peace through health in the 1950s.

DEPARTMENTS

3 Letters

4 Pulse

Studying infant mortality, division for addiction, Class of 1996, head for new Department of Ambulatory Care and Prevention, HIV insurance benefit.

8 On the Quadrangle

New Home for Research

9 President's Report

by William D. Cochran

10 Book Marks

The Way It Was: Sex, Surgery, Treasure & Travel 1907-1987 by George Crile Jr.; reviewed by John R. Brooks.

55 Alumni Notes

60 On My Mind

What's changing medicine? *by J.I. Frederick Reppun*; and "Modern Health Professional," a poem by Linda Covell Davis.

62 In Memoriam

Robert M. Zollinger Sr.
Charles Noble

64 Death Notices

The Waterhouse clock has been keeping time since 1790, the past 42 years at Harvard Medical School. But where was it made and by whom? Oglesby Paul '42 with Dick Wolfe did some detective work and have come up with some answers.

Moving on to more timely issues, we open with an account of how a badly needed women's health clinic was founded in Armenia. In her spare time, Nora Nercessian, PhD recruited faculty/alumni, supplies and whatever else it took to bring preventive and primary health care to women of this former Soviet republic.

Bernadine Healy '69 relates challenges faced by the NIH in this era of molecular medicine and financial constraint. We reprint excerpts from a play called *Miss Evers' Boys*, which dramatizes the events of the Tuskegee Syphilis Study. Ruth Fischbach, PhD, co-director of the HMS Program in the Practice of Scientific Investigation, introduces us to the play—written by Cornell physician David Feldshuh, who is also a professor of theater—and discusses the legacy of the notorious study.

Stanford neurosurgeon Frances Conley gives her views on what it takes for women to crack the glass ceiling, and Assistant Editor Terri Rutter looks into how female faculty are advancing at HMS.

We close back in the 1950s with an account of the late Charles Janeway's efforts to create a U.S.-style medical center in Iran. The authors—Frederick Lovejoy Jr. and Robert Haggerty—both trained under Janeway at Children's Hospital (Janeway was the Rotch Professor of Pediatrics and chief of medicine) and are working on his biography.

Ellen Barlow

Editor

J. Gordon Scannell '40

Managing Editor

Ellen Barlow

Assistant Editor

Terri L. Rutter

Editorial Assistant

Sarah Jane Nelson

Editorial Board

George S. Bascom '52
William I. Bennett '68
E. Langdon Burwell '44
Rafael Campo '92
Robert M. Goldwyn '56
Timothy E. Guiney '66
Joshua Hauser '94
Paula A. Johnson '84
Michael T. Myers Jr. '85
Guillermo C. Sanchez '49
Eleanor Shore '55
John D. Stoeckle '47
Richard J. Wolfe

Design Direction

Sametz Blackstone Associates, Inc.

Association Officers

William D. Cochran '52, president
Robert J. Glaser '43B, president-elect 1
John D. Stoeckle '47, president-elect 2
Richard Hannah '66, vice president
Samuel L. Katz '52, secretary
Mitchell T. Rabkin '55, treasurer

Councillors

Donald M. Berwick '72
Bernard F. Godley '89
Vanessa P. Haygood '78
Lisa Guay-Woodford '83
David D. Oakes '68
James J. O'Connell '82
Curtis Prout '41
Alan A. Rozycki '65
George E. Thibault '69

Representative to the Harvard Alumni Association

William D. Cochran '52

Director of Alumni Relations

William V. McDermott '42

Chairman of the Alumni Fund

Doris R. Bennett '49

The *Harvard Medical Alumni Bulletin* is published quarterly at 25 Shattuck Street, Boston, MA 02115 © by the Harvard Medical Alumni Association. Telephone: (617) 432-1548. Third class postage paid at Boston, Massachusetts. Postmaster, send form 3579 to 25 Shattuck Street, Boston, MA 02115, ISSN 0191-7757.

Letters

Thought Control?

In the Autumn 1992 issue of the *Bulletin*, Mark G. Perlroth '60, professor of medicine at Stanford Medical School, published a letter to express his unhappiness with Harvard's response to the Halloween incident. In that critique, Perlroth expressed his particular concern about what he termed "the use of psychiatry to quash unwelcome behavior"; opined "that although the university has the right to expect the students to adhere to certain standards of behavior, it does not have a right to define standards for thoughts"; and went on to indicate that he was speaking "with the perspective of experience at Stanford," revealing his distorted interpretation of the disposition one year ago of a disciplinary incident involving Stanford's neurosurgery program.

Although I recognize the futility of prosecuting debates of this type through the printed media, I do feel an obligation as dean of Stanford Medical School to try to set the record straight on at least a portion of Perlroth's argument.

First and foremost, the notion that we (and, I would suggest, Harvard as well) intended to use psychological counseling or psychiatric therapy as a vehicle for thought control is preposterous. To the contrary, in dealing with behavioral problems, which are the root source of the disciplinary issues to which Perlroth alluded both at Harvard and at Stanford, it is most certainly appropriate on selected occasions to recommend such counseling in the hope of modifying behavior that is both offensive and intolerable.

No one believes that such a therapeutic approach offers anything like a guarantee of success—but then, notwithstanding the gratifying scientific accomplishments of recent decades, I am aware of no magic bullet that can assure the correction of boorish behavior or promise the consistent expression of toleration, courtesy and civility in our human and organizational relationships. Certainly, as we all come to learn, neither professional accomplishment nor attainment of exalted professional status provides such assurances!

The medical profession, like all of American society, is undergoing a remarkable transformation with respect both to its demographic composition and to the opening of new opportunities that have historically been begrudged or denied to women and people of color. These circumstances create strains within the profession, as in other settings. But I believe that the medical profession in general, and our academic medical centers in particular, should be in the vanguard in creating environments that nurture all of their members and permit teaching, learning and work to occur in settings free of discrimination, sexual harassment, and all forms of intimidation and exploitation.

The modification of deeply ingrained patterns of human thought and behavior is a simple task. In facing up to our challenges in academic medicine, firm, steady pressure to foster awareness and heighten sensitivity must be coupled with a steadfast institutional resolve to respond briskly, fairly and unambiguously to instances of unacceptable personal and professional conduct that will regrettably be with us for many years to come.

I applaud Harvard's response to the Halloween incident in principle, if not necessarily in every detail.

*David Korn '59, Dean
Stanford Medical School*

Clarification

We are writing you concerning a minor inaccuracy in the most interesting article written by Arthur Ashe in the Autumn 1992 *Bulletin*. He states that "four New York City hospitals felt the problem of inadequate doctor/patient relationships...that they spent \$1 million videotaping encounters of medical students with fake patients." Similarly, he says, "this is the dilemma the \$1 million expenditure by New York hospitals was trying to address."

The Mount Sinai School of Medicine was the sole creator of this program in New York and obtained the funds to establish the Morchand Center. Happily, several schools in the city now send their students to the Mount Sinai Morchand Center to participate in this program, and were enabled to do so by a grant from the Josiah Macy Foundation. All of this is an outgrowth of a program in humanistic medicine begun at this institution in 1980, and supported by the Robert Wood Johnson Family Trust.

By noting this minor correction, we do not intend to diminish the author's important message. It is one we wholeheartedly support. Rather we seek to provide appropriate recognition and attribution to those farsighted philanthropic sources that made the city-wide Morchand Center a reality.

*Richard Gorlin '48
Nathan Kase, MD, Dean
Mount Sinai School of Medicine*

More on a Legend

I read with interest the Summer 1991 *Bulletin* on the general subject Drugs: Friend and Foe. I was particularly intrigued by the article on Dr. William S. Halsted.

I have recently obtained a letter by Dr. Harvey Cushing concerning Dr. Halsted and his cocaine habit. A copy of the letter is enclosed.

S.J. Hessel, MD

*Dr. R.W. Bett
London, England*

March 5, 1930

*Dear Bett,
I have just read your note on Dr. Halsted with interest. It is beautifully written. W.G. MacCallum is just publishing a biography of him which is not, however, yet in press or I would advise you to wait for it. I am sending you my small skit written several years ago of learning of his death. One thing you have omitted which might possibly be put in is the fact that he was for the few years that he was in New York and until his breakdown from his accidental cocaine habit, the most energetic and promising young surgeon in that community. He organized a quiz for Columbia students that amounted really to an extra-mural medical school.*

I may add that Halsted first introduced rubber gloves to protect the hands of his operating-room nurse whose skin was very susceptible to bichloride solutions which were abundantly used. From this start, all the assistants began to use rubber gloves, and finally the operator himself. Everyone who saw them in use in the '90s in Baltimore scoffed at their employment. But this is only one of the countless things which he added to surgical technique.

*Always sincerely yours,
Harvey Cushing*

A Wondrous World

I must congratulate you on that fascinating exposition entitled "A World of Wonders" (Summer '92). Gordon Scannell's comments were illuminating, and the photos and reproductions were an absorbing experience. My first impression was that they were macabre lugubriosities, and I wondered whether I had completely overlooked the aspect of Gordon's personality that could put him in juxtaposition with such oddities. This forced me to reevaluate beyond the usual knee-jerk response, and after due consideration, I was forced to revise my initial impression completely. It became quite apparent that this was an historic collection of art, and not at all deserving of such pejorative labeling. The oddity remained, true, but was now revealing instead of merely arresting.

I thought Gordon's comment about Alice and a glimpse beyond the small door into another world, was a stroke of genius. Like certain works of Alkan or Satie, an other-worldly artistic experience was evoked and found to be fascinating beyond description. One had to frame it in the context of history to make it all believable, but once that was done, *voilà!*

James L. Neller '39

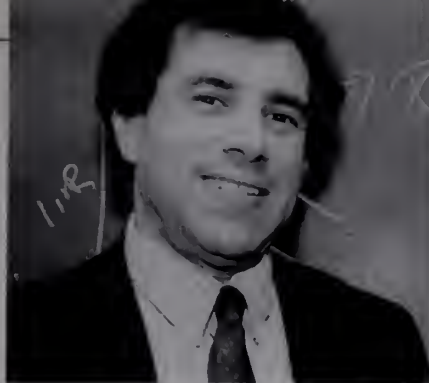
Studying Infant Mortality

Black infants are at an increased risk of being born dangerously underweight because their mothers are at higher risk for multiple complications of labor and delivery, suggested findings reported by Harvard researchers in the *New England Journal of Medicine* on October 1, 1992. The complications included chorioamnionitis, an infection of the fluid that surrounds the fetus, bleeding disorders and hypertension.

"The connection between low birth weight and high mortality among black infants is well recognized," notes Paul Wise, lead researcher for this study, and HMS assistant professor of pediatrics and HSPH assistant professor in the Department of Maternal and Child Health. Wise had published a study in 1985 that underlined the racial and social differences in child mortality from birth to adolescence. "After that project was published, we wanted to ask, 'What in fact are the clinical problems causing these elevated rates?' Now we have some clues."

In the current study, researchers from HMS, the affiliated hospitals and HSPH analyzed the medical records of about 1,300 infants born weighing less than 1,500 grams in Boston, St. Louis and two districts in Mississippi during the mid-1980s. Statistical analysis showed that chorioamnionitis accounted for the largest number (38 percent) of "excess" cases of very low birth-weight babies. The other cases were due to: premature labor of unknown causes (21 percent), multiple conditions (15 percent), hypertensive disorders (12 percent) and hemorrhage (10 percent).

"The solution to this problem is clearly more complex than people had anticipated, and we will need to attack it on many levels," says Wise. The results suggest that women need



Paul Wise

health care and guidance not just during pregnancy, but throughout their reproductive lives to prevent conditions that lead to premature birth and thus to a high risk of infant death.

To focus on the causes of infant mortality and improve the health of mothers and their infants, the Harvard Institute for Reproductive and Child Health has been initiated. It is a cross-disciplinary collaboration of Beth Israel Hospital, Brigham and Women's, Children's, and HMS and HSPH, under the directorship of Wise.

"The social dynamics of infant mortality have close linkages to the health centers, hospitals and community organizations," says Wise. "So, it is important for us to be able to use the energy and wisdom of all of these groups."

HMS Takes on Addiction

Harvard Medical School has organized a medical division to tackle one of the most complex and widespread problems of today's society, addiction to alcohol and drugs. The Division on Addictions has several goals, chief among them being the improved education of medical students on alcohol and drug addiction and more in-depth research into this societal ill.

"Alcoholism and drug addiction are among the most significant public health problems in the United States, but medical education and high-quality research in these areas have lagged behind other fields," says Steven Hyman, director of the new division and HMS assistant professor of psychiatry.

The division will approach the challenges of substance abuse through the interweaving of various fields, including psychiatry, neurology, molecular biology and public health, among other disciplines. Its organizers plan to work with addiction assistance groups in the Boston area, and they hope to involve many members of the medical

area community and its surrounding neighborhoods.

"One of our first priorities is to rethink and redesign the substance abuse curriculum for students," says Lawrence Friedman, HMS instructor in medicine and chairman of the division's educational task force. "There are quite a few medical school curricula on addiction, and most of them work very well for the first- and second-year medical students, but they fail for the third- and fourth-year students."

As another part of the educational program the division plans to invite Boston high school students to discuss their drug and alcohol experiences with HMS students.

Research on addiction is another priority. "In recent years neurobiology has begun to provide tools of unprecedented power to analyze the brain mechanisms responsible for drug abuse and addiction," Hyman says. "We need to know what causes the compulsive use that is at the core of addiction, and why some drugs are addictive at all."

Members of the Division on Addictions, from left: Shawn Bohen, Steven Hyman, Lawrence Friedman and Laurie Regan.



Pulse

Welcome to HMS!

The entering Class of 1996, who settled into place during the fall orientation, represents Harvard Medical School's commitment to diversity and to excellence, says Gerald Foster '51, director of admissions.

"The cycle has turned around completely," says Foster. "Four years ago, we were concerned about the decreasing number of students applying to medical school." The Class of 1996, however, was chosen from 3,000 applicants—the largest pool in five years.

The 70 women and 95 men range in age from 18 years (one student) to 36 years (one student), with the majority (64) being 22 years old. They come from 6 countries, including Iran and South Africa, Germany and 33 states, with the majority coming from California (28), followed by 16 from New York and 15 from Massachusetts.

In the distribution of colleges, Harvard/Radcliffe graduates predominate with 35 students. Ten students hail from Princeton University, followed by Columbia/Barnard and Stanford University with 8 students each.



MD/PhD orientation.

Photo by Barbara Steiner

Foster says that the school is "particularly concerned about increasing minority matriculation." This year, HMS matriculated 22 African Americans—the highest number in 10 years—10 Mexican Americans, 2 Native Americans and 38 Asians.

"This is the largest number of minority matriculants, ever," says Foster.

Science majors make up the largest number of new HMS students (114), followed by social science majors (20) and humanities (10). Foster says that the new MCAT exam has "very little dependence on pure memory and recall, and more on problem-solving." Of those matriculating, the average MCAT score was 11.11 in the biological sciences, compared to an 8.2 national average.

Foster initiated a deferment program in 1984, and this year, 24 of those accepted took advantage of it to do a variety of things: pursue research and teaching opportunities, discover cultural roots and learn native language, finish writing a book. "Some just need a break," says Foster. "It's good to allow them to take some time before starting medical school."



First-year students during the clinic orientation.

Photo by Barbara Steiner

New Leader for New Department

Thomas Inui, MD has taken the helm of the newly formed Department of Ambulatory Care and Prevention, a collaboration between HMS and Harvard Community Health Plan. The department reflects the increasing shift to ambulatory care, and the need to educate students in clinical settings where they can also focus on health promotion and disease prevention.

"An outpatient with a certain condition often needs different care than a hospital patient with a similar problem," points out Inui. "In addition to emphasizing clinical decision-making skills, the new HMS/HCHP partnership will provide opportunities for research, helping to shape the future of ambulatory care and prevention."

Inui comes to Harvard from the University of Washington, where he was professor of medicine and head of the division of general internal medicine. Before that he was on the faculty of Johns Hopkins School of Medicine, where he received his MD and MS in public health.

A leader in developing effective ambulatory care systems, Inui's studies have led him to conclude that patients are best served when they are enrolled in programs that continuously monitor their health. Without an efficient patient-tracking system, Dr. Inui points out that people who don't show up at a doctor's office are merely "non-events," and the results can be

costly. Ignored conditions can lead to advanced stages of disease, which eventually take a toll on the patient's quality of life and pocketbook, and in the aggregate, further strain the nation's health-care delivery system.

Inui will continue to serve as director of the Rockefeller/Pew Health of the Public Program. This is a five-year program linking 17 universities, including HMS, which strives to introduce broad-based public health perspectives and programs into academic medical centers.

Photo by Barbara Steiner



Thomas Inui

Insurance Benefit Offered for Work-related HIV Infection

The more than 50,000 physicians, students and employees of Harvard University and its affiliated medical institutions will henceforth be insured to receive a \$100,000 payment should they become infected with HIV in a work-related incident. This insurance benefit is offered at no cost to participants.

"Existing health care, disability and workers' compensation benefits do not adequately address the unique needs of the health-care worker infected with HIV," says HMS Dean Daniel Tosteson '48, who is also president of the Harvard Medical Center. "This benefit assures our employees immediate assistance if they become infected."

Work-related exposure must be well documented, but payment will be unrelated to the presence of physical symptoms of AIDS or to the ability to continue working. The benefit, paid in one lump sum, will supplement other benefits and compensation to which the employee would be entitled.

Test results will be confidential, and counseling and other support services will also be offered. All claims will be administered by the Risk Management Foundation of the Harvard medical institutions. Each institution will continue to decide its own policy on work responsibilities for HIV-positive employees.

Comments H. Richard Nesson, MD, president of the Brigham and Women's Hospital and chair of the Harvard Medical Center's AIDS Committee: "Health-care workers who, tragically, become infected with HIV while caring for others deserve our support and financial assistance. That is what this HIV benefit plan is all about."

On the Quadrangle

New Home for Research

"Welcome to this celebration of the symbiosis between science and medicine!" With that, Dean Daniel Tosteson '48, on September 12, commenced the dedication of the New Research Building—as it is called in lieu of a more formal name.

A scientific symposium opened the day, at which internationally renowned speakers discussed topics relevant to the fields of research that will be conducted in the building: molecular biology, genetics, neurobiology and immunology. Daniel Nathans, university professor of molecular biology and genetics at Johns Hopkins University School of Medicine, led off with a discussion of "Genetic Programs Induced by Growth Factors."

Shirley Tilghman, the Howard A. Prior of the Life Sciences Professor at Princeton University, followed with her talk, "Parental Imprinting in the Mouse." Klaus Rajewsky, professor of molecular genetics at the University of Cologne, discussed "B Cell Development as a Problem of Cellular

Selection," followed by Bert Sakmann, director of the Department of Cell Physiology at Max Planck Institute in Germany, with his talk "Quantal and Molecular Components of Excitatory Synaptic Transmission in Mammalian CNS."

Each speaker was introduced by his or her professional colleague within the New Research Building: Philip Leder '60, the John Amory Andrus Professor of Genetics and chairman of the Department of Genetics; Gerald Fishbach, Nathan Marsh Pusey Professor of Neurobiology and chairman of the Department of Neurobiology; and Fred Rosen, James L. Gamble Professor of Pediatrics and director of the Center for Blood Research.

The afternoon was filled with the colors and music of the official convocation. In full academic dress, the procession of faculty, accompanied by the New England Chamber Brass ensemble, paraded from Building A to a tent erected on the Quadrangle facing the new building. The sheriff of Suffolk



Photos by Chris Little

County called the meeting to order, and Reverend Peter Gomes, minister of Memorial Church, delivered the invocation.

Hailing the great researchers in Harvard Medical School's history, Dean Tosteson looked to the future discoveries in the New Research Building. "In a deep sense, all medicine has become in some part molecular medicine," he said. "Research in the new building is in the vanguard of this new wave of study."

Honorary doctorates of science were bestowed on Nobel laureates Baruj Benacerraf, Fabyan Professor of Comparative Pathology, Emeritus, and Torsten Wiesel, president of Rockefeller University. Medals for distinguished service to the school were



A convocation, held on the Quadrangle, celebrated the opening of the New Research Building.

Photo by Paula Lerner



President's Report

by William D. Cochran

awarded to John Taplin, James Stillman '32 and Robert Glaser '43B.

President of Harvard University Neil Rudenstine injected humor during his remarks when he commented on the appellation of the new building—the New Research Building—which he said, “imaginatively outshines its eloquently named neighbors, Buildings B and D.” He then praised what Tosteson had called the building’s overall synergism in its lab design: “Even the corridors are quite literally new pathways linking one building to another.”

Purnell Chopin, president of the Howard Hughes Medical Institute, delivered the principal address, in which he addressed the necessity of maintaining financial support for science. “Even for old hands in biomedical research, it is astonishing to realize that we now stand at the threshold of advances much more impressive and far-reaching than were dreamed of only a short time ago,” he said. “If adequately nourished, it will produce profound changes in the prevention and treatment of diseases and improvement in the quality of life.”

The convocation of the New Research Building perhaps echoed a similar ceremony that took place here over 80 years ago, one with the same spirit and commitment to academic research: the convocation celebrating the new quarters of Harvard Medical School in 1906.

Terri L. Rutter

The fall meeting of the council took place October 30 with 12 of the 15 elected members present, 5 of them newly elected. Nancy Rigotti '78 and George Bernier '60—two past council members of “the committee to ameliorate the high cost of medical education”—gave a progress (almost final) report on this important but complex problem. Lisa Guay-Woodford '83 also reported on the progress of our attempts at networking alumni for HMS students traveling for residency interviews and out-of-town electives. Coordination between alumni volunteers and such travelling students still needs better and quicker communication before this project gets moving.

My other favorite items were the inclusion of more practicing alumni on the council (and hence a voice to HMS administration regarding teaching and courses); attention especially to “3M” women (medicine-married-mother) and their particular issues; and lastly, possibly enrolling an occasional foreign student at HMS. Most progress has been on the first item.

Booming numbers of nationwide applicants to medical schools were succinctly detailed by Gerry Foster '51 (director of admissions). Ellen Barlow and J. Gordon Scannell '40 presented the perennial financial tension at the *Bulletin* regarding advertisements or no—with the council coming down in favor of exploring more advertising.

We welcomed Doris Bennett '40 as our illustrious new director of the alumni fund. Bill McDermott '42, in the third year of his second three-year term as director of alumni relations, reported his desire to retire at the end of this term. If nothing else, *tempus fugit*.

William D. Cochran '52 is HMS Associate Clinical Professor of Pediatrics and pediatrician-in-charge at the Beth Israel Hospital.

decor international
171 newbury st., boston
262-1529

an extensive collection
of fine needlepoint
rugs from China



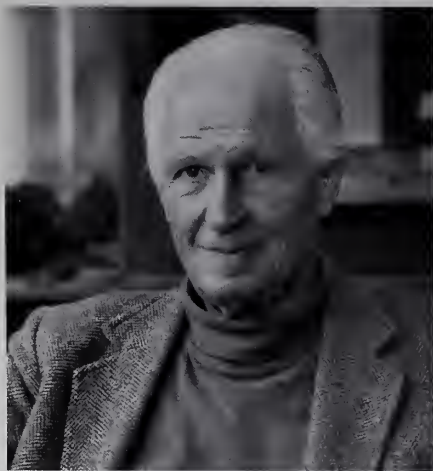
orientals
antique, tribal, Tibetan



handwoven rugs
orientals • village rugs • Polish
Romanian • Tunisian • Navajo
American hand-hooked
• tapestries • folk art
Free Validated Parking

Book Marks

Photo by Tom Merce, The Cleveland Clinic Foundation



THE WAY IT WAS: SEX, SURGERY, TREASURE & TRAVEL 1907-1987 by George Crile Jr. Kent State University Press, 1992.

by John R. Brooks

George "Barney" Crile Jr. died of lung cancer on September 10, 1992, in Cleveland at the age of 85. Earlier that year, he had completed this autobiography with the help of his wife, Helga Sandburg Crile.

In a sense this book serves as a memorial, a momentous 400-page story of a man whose life was never idle and whose beliefs were explosive, controversial, innovative and strongly expressed. This volume also expresses beautifully his love of life, family, friends and colleagues. As he points out in his dedication to his devotedly maternal mother, Grace MacBride Crile, she had saved files containing all the letters, photos and memorabilia that made it possible for him to recount the days of his youth. It is hard to believe that any mother could have maintained such constant and close contact with a son as she and her husband did through his early schooling, college, medical school and marriage. Clearly it left an imprint on him.

Barney went to University School in Cleveland, and then on to

Hotchkiss, where he did only average work, and Yale, where he did well scholastically and played varsity football. He was a member of the Skull and Bones Society. He began seeing Jane Halle, a Cleveland School chum, who was at Smith College. He and Jane were married in 1934.

Barney graduated from Harvard Medical School in 1933. His classmates and lifelong friends included Bert Dunphy, Bart Quigley, Brad Cannon, Max Eddy, Rolf Lium and Bud Yandell.

In his spare time in college and medical school, he worked in his father's laboratory and the operating rooms of the Crile Clinic, which his father had co-founded, and which was later renamed the Cleveland Clinic. Barney learned a lot from his father, which was to be the background for his later surgery. Together they wrote a number of scientific surgical articles.

At medical school, Barney's love of song, poetry and humor found expression in the *Lancet* and Aesculapian clubs, where he played a prominent role as one of the Gluteus Brothers—Maximus, Medius and Minimus—in his fourth-year show. He went on to graduate at the top of his class and then moved to Barnes Hospital for one year of surgical residency with Evarts Graham. At the time he thought of a thoracic surgical career.

From 1934 to 1936, he continued his training in general surgery at the Cleveland Clinic. The American depression of 1929-33 had temporarily devastated the clinic as well as the Crile family fortune. Added to this was a tragic explosion in an x-ray film laboratory at the clinic, which killed many.

Barney spent six months at Roosevelt Hospital in New York City in 1936, in gynecology with Howard Taylor, and then returned to the Cleveland Clinic, where he became

very active in general surgery, thyroid, breast, colon and gynecology. Tom Jones and Rupert Turnbull were his mentors.

Barney and Jane had four children: three girls and a boy. The family travelled together, went duck shooting, fly-fishing and hunting. They had a large farm outside Cleveland overlooking Lake Erie called The Knob.

When war broke out, he was assigned to a naval hospital in Auckland, New Zealand, where in 1941-42 he cared for surgical patients referred from the battles on Guadalcanal. In 1943 he returned home for a short training in plastic surgery at the Mayo Clinic, and then completed his naval duties at the Naval Hospital in San Diego.

It was here, stimulated by Rupert Turnbull, that he and Jane first became fascinated with underwater diving. They explored the Mexican underwater sites and enjoyed their stay in San Diego. Their fascination with underwater activities later took them to the Bahamas, where they dived at times with Ed and Marion Link, famous for underwater investigations. Here they found sunken treasures, cannons, ivory tusks in the Ivory Wreck, and pursued other explorations in the Dry Tortugas and Key Largo. And more than this, they travelled worldwide to Europe, the Middle East, India, Thailand, the Mediterranean, Corsica, Malta, Greece, tracing the Minoans, and to Turkey, searching for traces of Homeric history in Troy and looking for the wreck of Menelaus's vessel.

Jane had a simple mastectomy for carcinoma of the breast in 1959. However, their busy life of travel above and below the sea continued, as described in their book, *More than Booty*, and in their many films of their experiences.

Barney's surgical career continued

intermittently between his travels. He played a major role in organizing the Cleveland Clinic's surgical department, and personally specialized in breast, colon and general surgery. In the laboratory, he studied mouse leg tumors and concluded that lymph nodes were protective to animals with tumors and that radical tumor resection was not the answer. He developed interesting ideas about Hashimoto's struma lymphomatosa, which led him to believe that it was a disease produced by a civil war between misinformed lymphocytes and the normal thyroid.

He and Jane became strong disciples of Konrad Lorenz, whose strong belief in parent-child "imprinting" led them to study the animals that were always about them on the Halle farm and The Knob. Early imprinting, they believed, was the answer to child and animal development.

All the while Barney kept urging for more conservative surgery for thyroid, breast and ulcer disease, and strongly criticized the surgical profession for continuing radical surgery for these diseases. He suggested that too many surgeons were charging fees-for-service, as opposed to those at the Cleveland Clinic who were on straight salary. He also criticized the tendency for more and more responsibility to be given to incompletely trained surgical residents, and he was critical of the concept of "publish or perish," which took surgeons out of the operating room and into the laboratory.

Jane Crile died in 1963. In his book Barney expressed beautifully his loss and what she had meant to him. He quotes the words of the Unitarian minister: "We are gathered together in memory of Jane Crile. If you seek her memorial look about you—in the hearts of her family, in the faces of her children, in her writings, and in her home. Life has been given and life has

been taken away. Life and death are one, even as the river and the sea are one. Death is only a horizon and the horizon is but the limit of our sight."

In 1964 he married Helga Sandburg, daughter of the poet Carl Sandburg, who is also a writer as was Jane. With Helga he continued his travels, their love of the arts and of family. His two oldest daughters, Joan and Ann, have married surgeons—Roger Foster and Caldwell Esselstyn. Susie is an artist, and George is a news producer for CBS.

Barney retired at 65, but remained a dynamic force in surgery, continuing to push his concepts of conservative surgery to such an extent that he was openly criticized by the Cleveland Academy of Medicine. As time has shown, less radical surgery for breast and thyroid tumors has now been accepted.

Barney was a member of the Surgeons Club, the American College of Surgeons, the American Surgical Association, and Southern and Central Surgical Associations. He was made an honorary member of the Royal College of Surgeons in England.

He and Helga built a small residence they called Unicorn's Lair near Knob. They continued to study animal behavior and the Lorenz concepts of imprintment. They circled the world twice, and kept up with their writing and filming, poetry and songs.

As part of a memorial, Helga described his closing illness: "The heavens opened on the night of the ninth of September over Barney's garden. He was not there but storms had always been a part of him. Thunder roared. Lightning darted and the rain poured, the winds whirling it about. The garden welcomed it all, cleansed. He had watched its greenery, its flowers, its corn and zucchini; and herbs and trees moved through their stages of growth and have been part of the

garden's care. In the late afternoons he had smoked his small cigar and sipped his particular gin and tonic while observing the finches and the squirrels and the others at their feeding stations over the days from his chair in the grey parlor."

Barney's autobiography is excellent and comprehensive. Perhaps there are too many family letters, and the book is perhaps a bit repetitive in relation to travel, underwater activities, and his concepts of surgery. But he was a warm, positive person; challenging, stimulating, and extremely interesting and enjoyable to be with.

I knew him when we both sat on the Harvard Medical School Alumni Council. He wouldn't say much until after everyone had spoken, and then he would rise and speak out positively, perhaps abruptly and critically; but nevertheless, he said what he felt and perhaps we need more of that.

Barney had friends throughout the world from Bangkok to England and always spoke well of them, and they of him. He will surely be missed.

John R. Brooks '43B is HMS Frank Sawyer Professor of Surgery Emeritus and former chief of surgery at Harvard University Health Services. He is a former editor of the Alumni Bulletin.



Feast Day for Armenia

by *Ellen Barlow*

IT IS EASY TO BE DISTURBED BY SOMETHING, cry over it, but then go back to the complicated business of living one's own life. It is quite another thing entirely to be the one who does not look away.

She didn't even know what an ultrasound was when she started. But within 11 months Nora Nercessian, PhD, executive director of the Alumni Association, and Harvard Medical School alumni and faculty she recruited, joined together in launching the Center for Women's Reproductive Health in Yerevan, Armenia.

The center, which opened in July 1992, is booked ahead solid through August 1993 with women eager for the kind of preventive care and treatment women in the United States take for granted. With the continuing involvement of Benjamin Sachs's Department of Obstetrics and Gynecology at the Beth Israel Hospital, the center has become a model for women's health care in the former Soviet Union.

International health agencies knew there was a women's health problem in the former Soviet republics. The statistics cited by WHO and UNICEF are alarming: The average woman has had

multiple abortions, the only readily available method of birth control; some have had as many as 40. Because legal abortions cost a lot and are in high demand, about half of the abortions performed are "black market," performed at home by "experienced" women. Maternal mortality is significantly high. Add to this the lack of diagnosis and treatment for sexually transmitted diseases, and the result is that one out of three women is infertile.

Nercessian's "odyssey" started with her vacation to what was still Soviet Armenia in the summer of 1991 to visit her husband, Gérard Libaridian. He had originally been invited there for three months to establish a Department for Documentation and Analysis for the Presidium, the former Soviet Parliament, but he stayed on post-independence and is now one of President Levon Ter Petrossian's top advisors.

Nercessian had never been to Armenia, a small country with a largely urban population of 3,574,500. Though she's ethnic Armenian, the closest involvement she had had with the country had been to coordinate an international congress in Paris commemorating the earthquake of 1988 in Armenia.

As an historian trained in medieval

The Monastery of Khorvirap in the foreground of Mt. Ararat.

European culture and history, she found herself fascinated with the “layered landscape of monumental fossils that survived beyond their time and beyond their creators.” Armenia is full of ancient ruins: 4th century AD cathedrals, Hellenistic temples and, perched on a hill in the capital city of Yerevan, a 6th century BC fortress of the first Urartian kings. From just across the Turkish border in what was historical Armenia, Mount Ararat—where the Biblical Noah’s ark landed—is a commanding presence in this very mountainous region.

“I could feel history in the making, vibrating as the country moved toward independence,” Nercessian explains.

But then the mayor of Yerevan invited her to visit some maternity hospitals. The new government was very concerned about the health of women and children, he told her, and asked: “Can you do anything?”

As she wrote later in her journal: “All my life I had developed the skills and language of a cultural historian, but none of that now seemed relevant or helpful. I could easily describe and interpret the iconography of the medieval manuscripts housed in the ancient library in Yerevan. But what language did one use to describe the agony of women who had to live their lives under conditions for which we couldn’t even find the proper syntax, medical or otherwise. The world had helped Armenia deal with the devastating earthquake, but what about the earthquake—the multiple earthquakes—in the woman’s body?”

Nercessian won’t talk specifically about what she saw. But the Beth Israel team who went over with her to open the center described in grand rounds when they returned some of what they found. Under the Soviet system, there are no annual check-ups, cancer screenings or prenatal care. Metaplasia, a cervical tissue change known in the West to be normal, was considered abnormal and called “erosion” by Soviet gynecologists. This normal condition was treated by cervi-

cal amputation, cautery or even hysterectomy. One of the main reasons for this lack of knowledge is that their most recent Soviet medical textbooks date back to the 1960s.

On a lay-over in Paris on their way home in August 1992, Nercessian and her 13-year-old daughter, Lorky, visited her cousin Veronique, a pharmacist. They drove out to Carnac, a seaside resort in Bretagne known for its neolithic menhirs. They walked the shore and came up with the idea for a

Under the Soviet system, there are no annual check-ups, cancer screenings or prenatal care.

women’s health center.

“I hadn’t the foggiest notion of what was involved in setting up a clinic for women,” Nercessian wrote in her journal. “I knew nothing about the problems I heard about during my visits to hospitals and maternity wards, the severity of gynecological conditions whispered to me by women, the absence of reliable treatments. But I knew it had to be done.”

Back in Boston, in a meeting with Dean for Medical Education Daniel Federman ’53, Nercessian mentioned how disturbed she was by what she had seen. He suggested that she write up a project plan. To her it was the verbal equivalent of throwing down the gauntlet.

Federman said later that he had no idea at the time of the scope the project would take on, but that he remembers thinking that because of the enormous energy he has seen her devote to alumni association projects, and with her connections in Armenia, “that unlike other travelers, she really

could do anything she set out to do.” He advised her throughout on ways to proceed and recommended the formation of a charitable trust. He agreed to serve as president of the Charitable Trust for Women’s and Children’s Health Care in Armenia; Nercessian then recruited other trustees: Doris R. Bennett ’49, Robert M. Goldwyn ’56, Nina E. Tolkoﬀ-Rubin ’68 and Benjamin P. Sachs, who is obstetrician/gynecologist-in-chief at the BI and associate professor of obstetrics and gynecology at HMS and HSPH.

International health agencies told her it would take two to three years and a staff of six to pull off what Nercessian and her recruits eventually accomplished in about 11 months—in their spare time. But far from thinking the naysayers were wrong, Nercessian admits they were right. “We were able to do it sooner only because of the incredible spirit of cooperation from all directions and the willingness of friends at the Beth Israel, as well as elsewhere, to donate so generously their time and expertise.”

Pharmaceutical and other companies in Europe and the United States donated contraceptives, antibiotics and ultrasound equipment; friends pitched in money for travel and supplies; other supplies came from the BI and Deaconess hospitals; and two attorneys—Ira Deitsch and Rhonda Hollander—at the law firm Posternak, Blankstein & Lund worked pro bono to set up the trust, with the international CPA firm of Grant Thornton handling the trust’s account.

Her husband’s government role facilitated arrangements but, above all, she says, what really made it happen was that the Armenian leadership had set the improvement of women’s health care as one of their top priorities. This, despite the economic strait-jacket in which Armenia, like other former Soviet states, is operating.

As a UNICEF team summarized after a site visit to Armenia in February 1992: “The overall situation in Armenia is gloomy. Breakdown of the Soviet Union has resulted in the dis-

ruption of supply of food and raw materials for industry from the other republics. The escalation of the conflict in Nagorno-Karabakh has resulted in a continuing influx of refugees and disruption of fuel supplies which normally came from Azerbaijan. Schools have had to be closed due to the harsh winter and the inability to heat them. Health facilities are teaming with health professionals and patients, but with virtually no drugs or medical supplies in stock. Immunization has been disrupted since the end of 1991 due to lack of vaccines. Maternal health continues to be in jeopardy due to the widespread use of abortion as a measure for family spacing."

Despite economic hardships and hosts of problems affecting Armenia as it struggles to re-adapt to independence after 70 years of Soviet totalitarianism, the Harvard team were treated like dignitaries. "We were greeted with enthusiasm and gratitude, and a determination to make the changes necessary to get the country on its feet," says Sachs. Along with Nerecessian, he and two others from his department—Joseph Mortola, associate professor of obstetrics, gynecology and reproductive biology, and resident

Renée Goldberg—were in the first shift of BI physicians to go to Yerevan in July and August 1992. They all used vacation time to go.

When asked why she gave up what in residency is particularly precious vacation time, Goldberg answered that when she volunteered, it was to do something different, something that would make a difference. She knew nothing then about Armenian politics and culture. "But when there, I was flooded by feelings for the people and the project. The people took us into their homes and their hearts and told us about their hopes and aspirations."

The clinic building was provided by the mayor of Yerevan and is equipped with amphitheaters, examination rooms and administrative offices. It is adjacent to the 1100-bed Erebuni Hospital, but has its own budget, medical and administrative staff (six female physicians, seven nurses, and administrative and laboratory staff, whom Nerecessian had hired before the BI doctors arrived). For supplies, they are dependent on what is sent over through the trust. Ninety boxes of supplies—packed and warehoused by Nerecessian, her daughter and friends—arrived one week before the first team in July.

The program for the center was devised to be low-tech, basic primary health care. Sachs was all set to say no to yet another commitment the day Nerecessian came to his office to ask him to join their efforts. "I see too many high-flying, high-technology projects fall flat in a few years," says Sachs. "But I was impressed by Nora's intensity and commitment to primary care and prevention."

The teams who went over in the summer to launch the center were there to educate the public and health professionals through press conferences, public lectures and one-on-one instruction; establish medical examination and treatment procedures; train staff in contraception counseling and provide contraceptives; and to train staff in administrative and record-keeping systems.

For patient education, the *Handbook for Reproductive Health* was written by Nerecessian—who quickly learned the basics about anatomy of the reproductive system, pregnancy, contraception, and sexually transmitted diseases—with help from Goldberg and Theresa Quinn '92, who was then a medical student. That booklet was printed in English and Armenian, and all slides and educational materials were also



At the opening reception of the Center for Women's Reproductive Health in Yerevan, Armenia. From left to right: Benjamin Sachs, Lucia Ter Petrossian, Armenia President Levon Ter Petrossian, Nora Nerecessian, Renée Goldberg and Joseph Mortola.



professionally translated.

One Armenian physician spoke English fairly fluently, and the others are learning. But still a translator was necessary most of the time. This worked smoothly, with one amusing exception—at their first press conference.

“We thought it had gone well,” relates Sachs, “but people were giving us long, puzzled looks. It turns out that when we talked about how we were there to train ‘six female gynecologists’, it was translated as ‘six female sex organs’.”

These six Armenian physicians and the Americans became fast friends. Besides Goldberg, the three other residents who came later in the summer with David Chapin ’64 were also women—Adrienne Lara-Fuller, Katherine Liniecki and Katherine Marshall. One of the positive dynamics, Nercessian points out, was the role model these young American physicians set for their Armenian counterparts.

“In Armenia, there are many female physicians and they are esteemed,” explains Goldberg, “but they were never in a position of authority. They weren’t asked what to do about a clinical problem or to make their own schedules. But in the clinic they had to make decisions and take charge. We saw them grow strong and blossom with confidence.”

The other thing that physicians and patients all responded to with enthusiasm was the emphasis on treating

patients with respect: covering women during exams, knocking on the door before entering, asking permission before touching them.

The majority of physicians at the clinic and the hospital were open to the new ideas, and craved new knowledge, but they were used to different ways of doing things. “It was not that they didn’t have speculums,” as Joe Mortola explained later in grand rounds, “but they had ones we didn’t want. We would put ours in the exam rooms one day and the next day theirs were back. I called this the “speculum cold war.” Or another example Mortola cites: “Just as routinely as we use magnesium sulfate for preeclampsia, they use vitamin A. We had a big challenge in education, but I think in the end we succeeded.”

Goldberg’s assignment was to establish a microbiology and cytology laboratory, no small feat for a resident who is not formally trained in these fields. The concept was to plan a lab that was not too technically advanced or expensive that it could not be maintained, but one that could address the main problems: infertility, infections, sexually transmitted diseases. For example, wet smears had never been done previously, which limited their diagnosis and treatment of vaginal infections. Since women didn’t have yearly exams, routine PAP smears were not done. Pregnancy tests were not even readily available.

There are tangible accomplishments the Americans can point to:

they conveyed the importance of annual check-ups, of breast exams, and began the task of educating women that contraceptives could be safe, unlike the ones available on the black market. But all who went to Armenia quickly add that they took away even more than they gave.

The team was invited many times to the home of the medical director of the hospital, Artium Koushian, who, says Sachs, is a “man of extraordinary energy and vision without whose support we never could have changed the styles of how people were treated.” They were wined and dined by the mayor, Hamparzoom Galstyan, and the President and the first lady, Lucia Ter Petrossian. They were moved to tears by the stories they heard.

These government leaders are all academics, who—in the era of perestroika in the late ’80s—had formed a democratic committee. No one will forget the story told by Yerevan’s 36-year-old mayor, an ethnographer by training and lover of art. Fearing a popular uprising, the KGB imprisoned him and the other democratic leaders within hours after the earthquake of 1988. He told the group vivid stories of solitary confinement in Soviet prisons and how he was tortured.

One day Sachs was in the office of the mayor, who wanted to show him some artwork. “Phone calls were coming in. They were trying to get coal from Siberia shipped by train, trying to get second-hand buses from Iran, outside his office were trade union protestors, but here in his office, he was showing me artwork. It really struck me how calm and controlled he was in juggling an enormous amount of responsibility.”

A touching moment took place at a charity auction for earthquake victims of French-Armenian artwork in Yerevan. Sachs bought a painting, and as he was going to pick it up, the mayor announced why Sachs and his group were in Armenia. The bidding went on. “Later, one of the people in the room came up and handed us a painting as a gift. He was practically in

tears, thanking us. The painting cost him \$450, a huge amount of money." It depicted a scene of destruction caused by the earthquake.

An estimated 50,000 to 60,000 lives were lost in this earthquake, many of them children. Not only is the country currently involved in military conflict, it has a long history of battles and massacres of its people. Historic Armenia was over three times its present size; its geographic location made the country a bridge over which passed trade caravans from India and Central Asia to the West and vice versa. The first country to embrace Christianity, Armenia is alone amidst Moslem nations. For centuries it was the arena for battles among ancient nations such as Babylon and Assyria, Persia, Rome, Greece and in more recent history, with Turkey.

Sachs says he was struck deeply by the similarity between the Armenian people and the Jewish people of his heritage. The writings of Turkey calling for extermination of all Armenians—leading to a barbarous genocide of an estimated one and a half million Armenians in 1915—ring similar to Hitler's words about the Jewish "problem" and its "solution."

As Sachs said at grand rounds after highlighting Armenia's history, "These genocides are the driving force of their cultures and their politics, summarized in the statement, 'Never again'."

Sachs' wife and eight-year-old son, Alexander, joined him in Armenia for awhile. He and Alexander spent an

hour at the genocide memorial in Yerevan. Sachs had lost his grandparents and many of his family in the holocaust. "Alex, who had also been to Jerusalem, could feel for it and understand it."

Understanding the country's history and culture enriched the experience of those who went. They said it gave them a very palpable sense of why a country with so many challenges would choose women's health as a priority. As President Ter Petrossian said

*"This is a feast day
for us because it deals
with our future, our
children."*

at the center's opening reception on July 24, 1992: "This is a feast day for us because it deals with our future, our children, and thus the health of our nation."

This is by no means the end of the story. Site visits have been planned every few months to continue the training and development of services the center can offer. In October, for example, BI's chief ob/gyn resident Mark Kobelin and Louis Burke, "the father of colposcopy" and foremost expert on cervical cancer, spent two

weeks at the center. Prenatal care is nonexistent and something Sachs would like to tackle next spring. Goldberg hopes to join the staff at BI when her residency ends, and stay involved with the project as well.

The board is continually evaluating its program and adding new goals. Patients have been coming to the center from all over Armenia and from the other former Soviet states. The need vastly exceeds this one center's capabilities. Supplies are rapidly being consumed. How can the momentum be maintained?

"What are my alternatives?" responds Necessian. "We'll have to push on." She admits to some pride in what has been accomplished, but adds that if asked by another state to do something similar, she'd do it there, too.

Federman points out that as someone involved in medical education, "I'm very interested in how students learn our values. They watch what we do rather than what we say."

"Ben Sachs and his troops from the BI have been wonderful. They went over on vacation time and not only provided care, they also taught the local people how to run the clinic themselves." In the truest sense, Federman suggests, they have fulfilled the essence of the words: Give someone a fish and you feed him for a day; teach someone to fish and you feed him for a lifetime. ❧

Ellen Barlow is managing editor of the Bulletin.



Ահ, այս Արարատ...
Որքան խափում են սրտերը բոլոր,
Երբ ինքը... քար է.
Որ ջերմացնում է սրտերը հոյակ,
Երբ ինքը... սառն է...

Գեորգ Եմին

Ah, this mountain Ararat
Though made of stone,
Softens men of stone.
Though made of ice,
Melts hearts of ice.

—Gevorg Emin
(translated by Diana
Der Hovanessian)

Politics, Patents and the Public Good

by Bernadine P. Healy

IT IS A RARE THING FOR A JOKE TO make news these days unless it is libelous, unprintable or told off-mike by a candidate for the presidency. But last Monday [December 2, 1991], in reporting on a speech by Ivan Selin, Chairman of the Nuclear Regulatory Commission, the *Washington Post* gave the full text of the joke with which he began. It went like this:

A college president dies and much

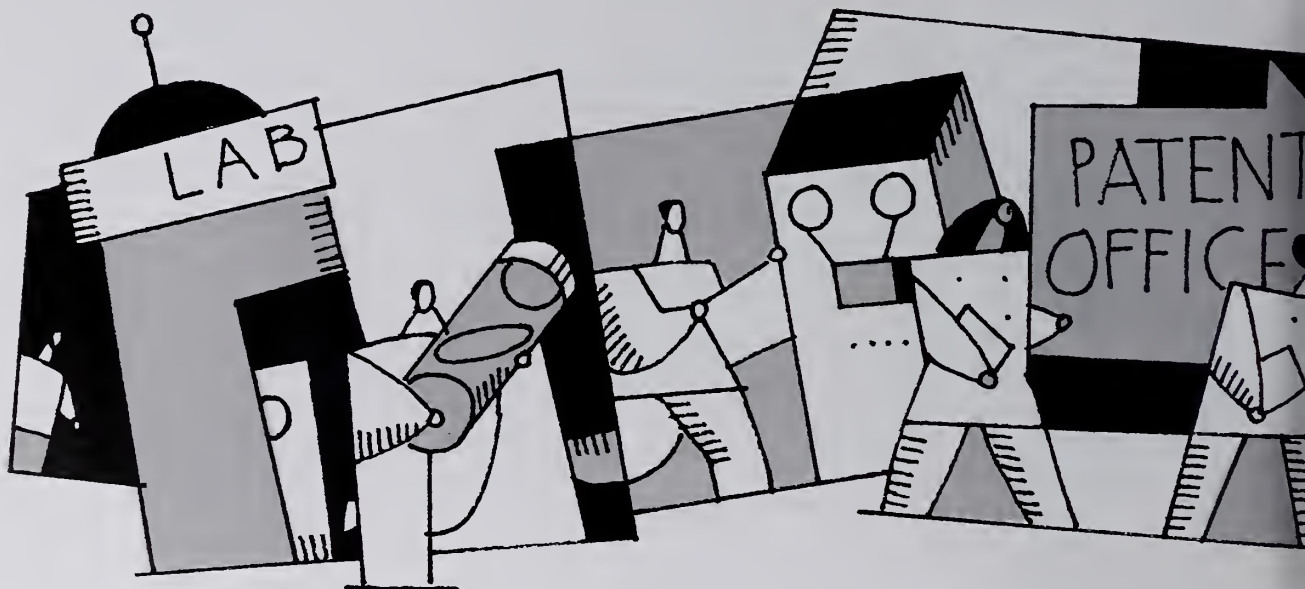
In the great tradition of helping people, medicine and politics go hand in hand.

to his surprise, discovers he's not going to heaven. But the consolation prize is that he gets to be president of the University of Hades. When he gets there, he discovers a lovely campus, great facilities and well-dressed students. "Johnson," he said to a colleague, "Is this really Hades?"

"It sure is."

"What makes it Hades?"

"The University of Hades has three



medical schools."

The *Post* ran the joke as news, not because it was so funny, but because it fell flat—most of the scientists in the audience didn't get the point. It seems that at least one segment of the scientific community doesn't know as much as it might about medical schools.

I have encountered a similar lack of perception among many in the biomedical and academic community about the nature of the biomedical research enterprise in general and of the National Institutes of Health in particular.

There should be no surprise that the biomedical research enterprise has become so visible, so important, and of such interest to the public. We have succeeded in conquering many of the diseases that have plagued humankind for millennia. And because we have been successful, we must operate in an environment of heightened political expectations and political visibility. This is a time of more challenging methods of inquiry, increasingly complex technology, accelerating obsolescence of facilities, intense public scrutiny through the media, and growing intolerance of the human frailty

that often accompanies creativity and energy.

More than other areas of science, new medical knowledge is coveted by the general public. And those of us who are engaged in biomedical research, in medical care, and in the teaching of health professionals are in the service of the public. We are, in fact, classic public servants.

In the great tradition of helping people, medicine and politics go hand in hand. But to a greater degree than those in political life, we are in media *rei* (in the middle of things) or in media *vita*—touching people's lives, improving lives, extending lives, and offering more than hope.

People often lament to me that NIH seems to have become so political. My response is "but NIH is political." NIH was created by acts of Congress, it lives within the executive branch and is annually funded by public money. That is about as political as you can get. But by its nature, NIH should be politics at its best—non-partisan politics in the public interest.

There are some very good reasons why NIH has political exposure; and furthermore, there are some major

consequences of this political exposure—some good, some risky, and some possibly bad. We as a community entrusted to steer this great American biomedical research enterprise must become political scientists of sorts, to ensure a sturdy future for the medical sciences.

First, NIH and the scientific community are clearly facing expanding political exposure. This exposure likely has its roots in the practical and decentralized fashion in which both grew up. NIH invests in more than 1,700 universities, colleges and research institutes throughout the country, and each of these represents a different part of the country, a region, a town, connected in its own special ways to its surrounding communities and local citizens.

Among many things, what has made us so public and so immersed in political reality is the extraordinary success and power of the enterprise. Biology is transforming our world and heightening our expectations. The power of biology and the medical sciences has never been more keenly felt or witnessed by the public. The popular basketball hero Magic Johnson is



diagnosed with a fatal dread disease, and before he has even taken ill, we are confronted with the public expectation that before he becomes sick, medical science will find a cure that will save him.

There is no greater value, no greater hope, and no more reasonable demand than that. And that is so whether the disease be AIDS, childhood leukemia, breast cancer, malignant melanoma, schizophrenia, addictive disorders, Alzheimer's, atherosclerosis or osteoporosis. The expectations and the demands are not misplaced, even if the timetable cannot be assured.

Past investments in biomedical research are yielding powerful insights into the underlying mechanisms of disease, and advances will continue to result from an enormously expanding knowledge base. At the center of this expanding knowledge base is molecular medicine and the opportunities that abound in this arena. We are in the midst of a strategic planning effort at NIH—an effort to bind us all by a compelling vision—to articulate the vital areas of science and policy that corporate NIH must address. At the center of this effort is molecular medicine.

Molecular medicine represents this nation's exploration of "inner space"—the cells, genes and molecular structures of the human body. This journey is propelling us toward what only was imagined a decade ago, and the future payoffs have the potential to outdistance those of our explorations of outer space.

Molecular biologist Gunther Stent adopted a novel personal and historical perspective when he observed, "The fantastically rapid progress of molecular genetics in the past 25 years now obliges merely middle-aged participants in its early development to look back on their early work from a depth of historical perspective, which for scientific specialties flowering in earlier times came only after all the witnesses of the first blossoming were long dead. It is as if the late 18th-century colleagues of Joseph Priestley and Antoine Lavoisier had still been active in chemical research and teaching in the 1930s, after atomic structure and the nature of the chemical bond had been revealed."

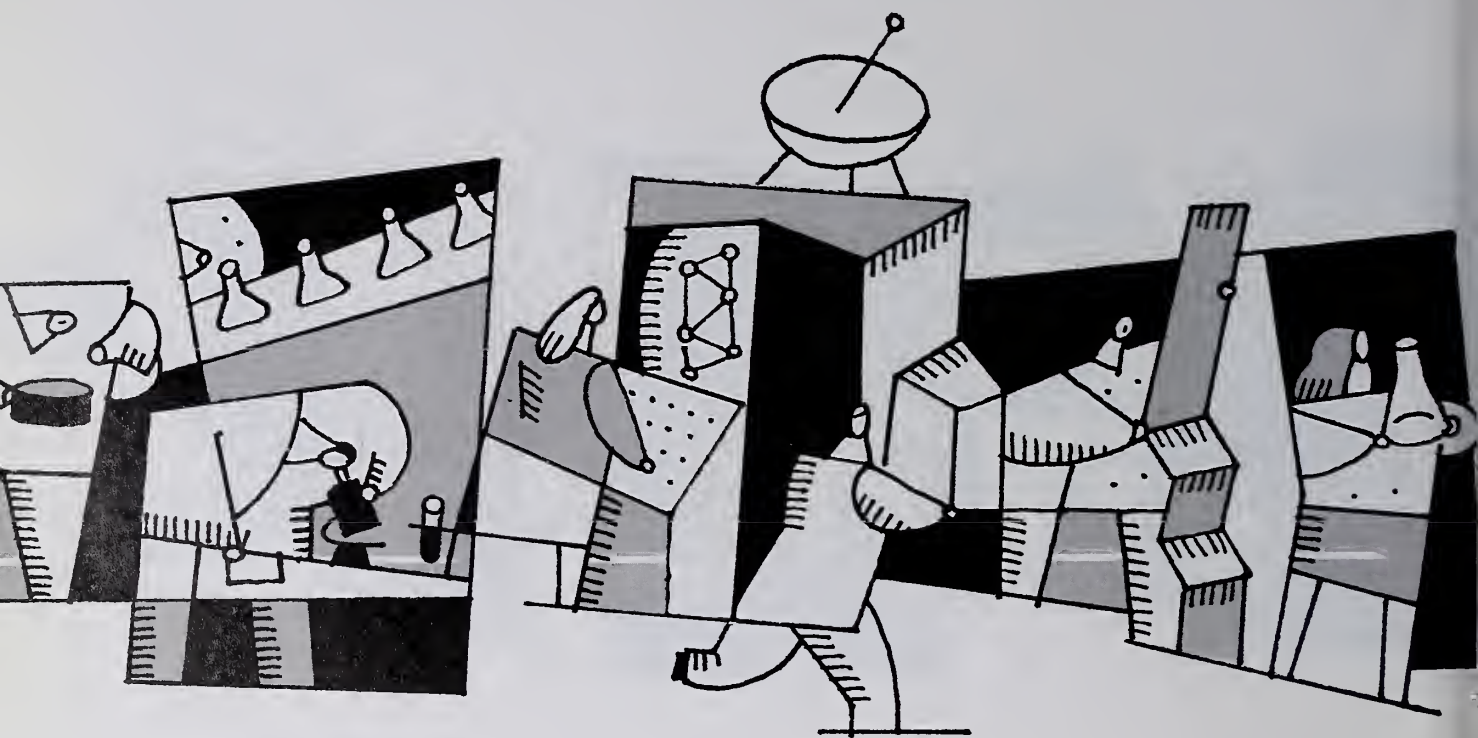
The goals of molecular medicine are far-reaching, but in immediate sight. These goals include characteriz-

ing the factors that modulate gene expression and maintain cellular balance; defining the multiple pathogenic steps and interactions that culminate in disease; designing rational, highly targeted clinical inventions; and identifying heritable risk as a basis for disease prevention.

In accordance with our strategic planning process for the final decade of this century, the NIH is poised to enhance this incalculably valuable resource of knowledge as the fountainhead for a vast array of research endeavors that will move us closer to the goal of good health for all Americans.

Thus, profound changes in the practice of medicine and prevention of disease are now on the horizon. These changes will have dramatic effects on improving health and the quality of life, preventing disease, reducing health care costs, and ensuring U.S. competitiveness in the world's high technology markets.

What the public and public officials are also just beginning to see are the powerful economic implications of this modern biology. The economic cost of Alzheimer's is estimated to be \$80 bil-



lion per year; the cost of all cancers in this country, \$100 billion; and of mental illness plus addictive disorders, in excess of \$200 billion per year. Although medical technology has contributed to these costs with its therapies that extend life, more powerful understanding of the molecular and genetic causes of chronic debilitating disease offers the hope for extending healthy life through prevention and interruption of disease.

It is clear to me that technology transfer is a vital methodology for NIH to realize its mission. With regard to commercial products, pharmaceuticals, vaccines, vectors for gene therapy, bioinstrumentation and medical devices, commercial incentives drive the costly development investment typically made by private industry. And herein lies a major political issue, what Dorothy Nelkin has called the "politics of knowledge—the question of who owns and controls the distribution and use of scientific information."

It was not until the decade of the '80s that technology transfer was fostered by the federal government as a social and economic good, and the responsible outcome of public invest-

Molecular medicine represents this nation's exploration of "inner space."

ment. Of monumental importance to academic institutions was legislation enacted in 1980, which encouraged industrial-academic collaborations and allowed universities and other federal grant recipients to apply for and hold title to patents developed with federal funding.

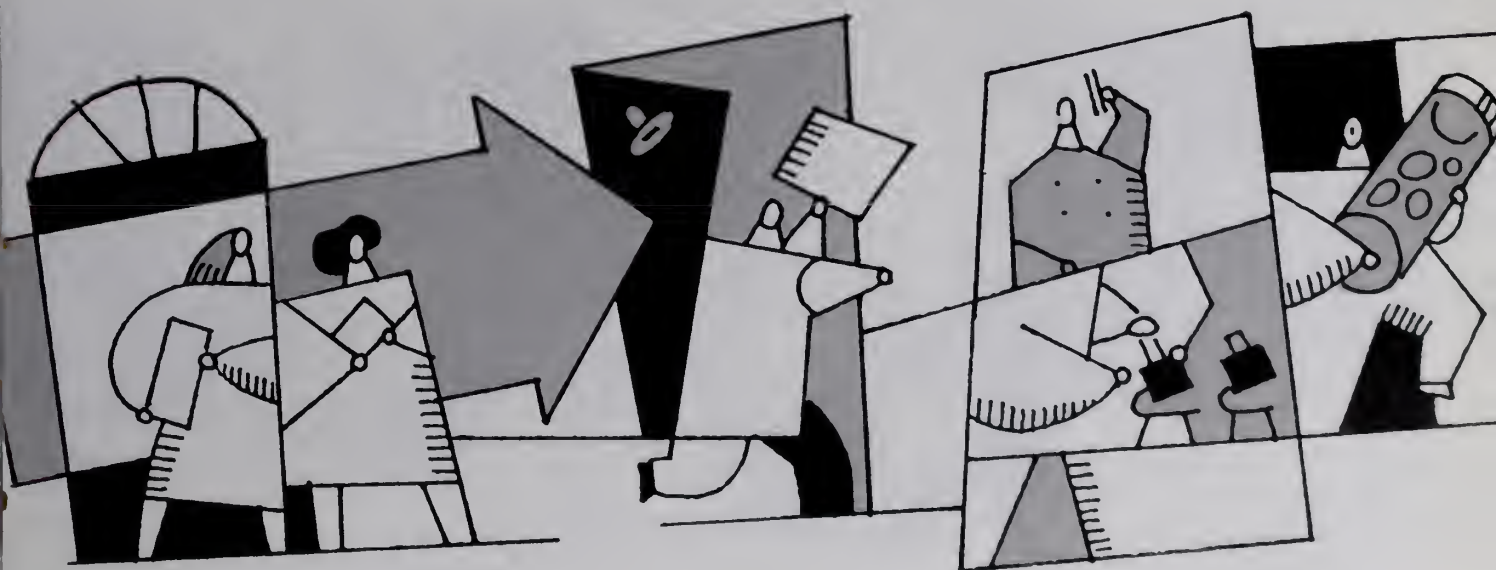
The Federal Technology Transfer Act of 1986 plus Executive Order 12592 provided similar patent and licensing authority to federal laboratories and strongly encouraged government laboratories to secure and transfer intellectual property rights.

NIH and the biomedical research community have responded vigorously to encouragement to transfer knowledge into products. Technology transfer is a social good. Profit is only one of many motivations for patenting an

invention. Desire to exert control over a discovery to ensure public good is another reason. Examples of such purposes include the patenting of the cyclotron to provide for its medical use and the patenting of the blood pressure cuff by the Rockefeller Institute to foster its widespread clinical use.

It is not entirely clear, however, exactly how patent law will apply to all the fruits of NIH-funded research, particularly as it relates to molecular biology and genetics, and in particular to the discoveries relating to the human genome. Case law has broken major ground this past decade, but more is yet to come. In 1980, the Supreme Court upheld the Chakrabarty patent of a bioengineered living microbe. Shortly thereafter the Boyer-Cohen patent was awarded to Stanford University, which covered basic recombinant DNA expression vectors.

These patents were met with major outcries from the scientific and lay community, with critics asserting that preoccupation with patents would destroy the academic tradition of free exchange of information, and that the best minds of science would be diverted to commercial development



for profit rather than devotion to the solution of more basic problems.

Since then, we have seen basic biology thrive and a robust biotechnology industry develop, in part based on numerous patents of recombinant genes, cDNA sequences, genetically altered organisms and transgenic animals owned or licensed because of NIH-supported work. These have become part of the evolving case law that is necessary to create a stable environment in which fundamental biological knowledge is transferred into useful and valued products. But, as we have already seen, establishing that body of case law can be difficult, contentious and highly political.

In that very context, NIH is now embroiled in a political debate over its decision to pursue patent protection for genetic cDNA sequences discovered within its intramural research laboratories. Dr. Craig Venter has created a stir within segments of the scientific community, government and industry by filing patents on over 300 novel genetic sequences that he identified in the human brain. Practical use of these novel molecules was proposed in the

News reports have accused the NIH of "insensitivity" and "unhealthy ambition."

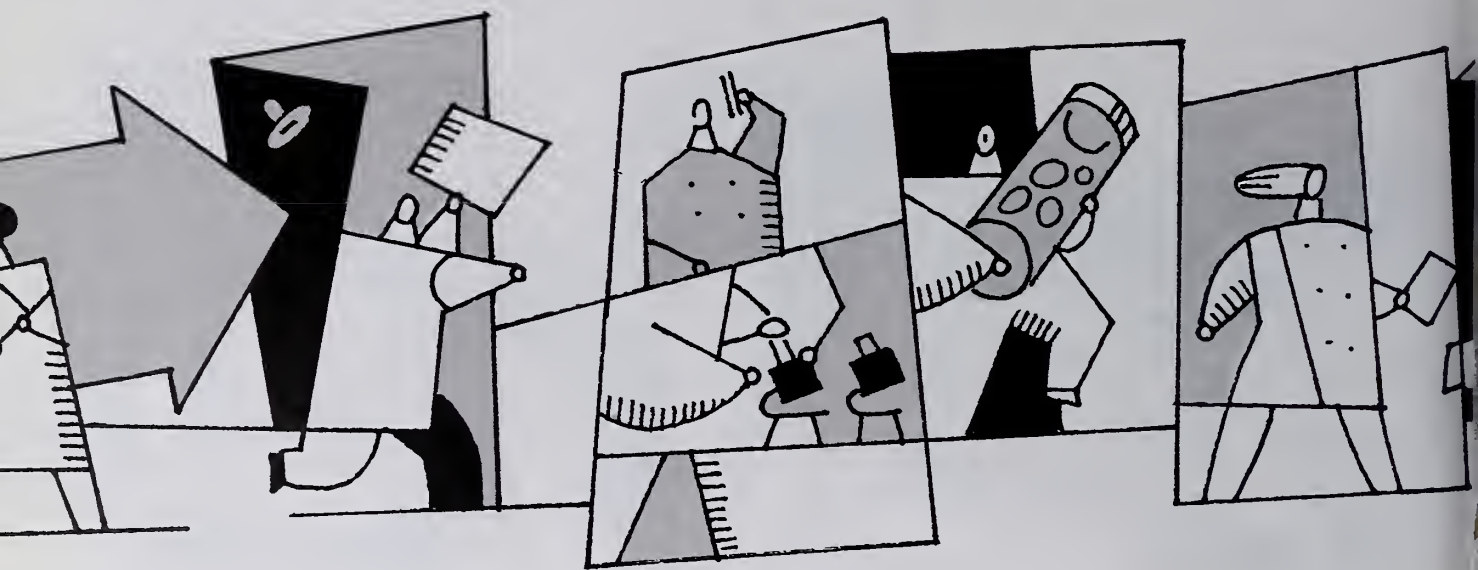
filings, even though the specific biological role of the expressed genes in the brain is not yet known.

NIH filed these patents to preserve its options, if indeed such sequences are both patentable and commercially valuable. In accordance with federal law governing its own laboratories, the filing itself was made public, a disclosure not ordinarily made by industry or other private entities. It is not known how many other scientists here or abroad who have made similar patent applications, nor is it known whether the U.S. Patent Office will find these molecules patentable.

Nevertheless, the firestorm swirling within and around the NIH reminds one only too well of the politics of NIH

and of modern biology. Already news reports have accused the NIH of "insensitivity," "unhealthy ambition" to expand its influence and authority, and of a "ruthless scientific power grab," which will restrict data sharing and collaboration and harm the biotechnology industry.

Critics fail to point out that genes, and specifically cDNA sequences, have been and are being patented; that competing to file for patents is generally viewed as a positive force for research and development and industry growth; that patent applications force immediate disclosure and not secrecy and, in the NIH's case, mandate immediate collaborative efforts; and that keeping NIH's intramural laboratories from filing patents on cDNA sequences does not block others, including those very same scientists recruited to private industry or foreign countries, from filing patents on thousands of the genes they are working on using the same technology. Attacking Venter's patent application does nothing to resolve the inevitable policy issue of what is patentable in the constellation of our expanding knowledge base of human, animal and plant



genetics.

Clearly there is a process in place to resolve the major issue of patentability, namely the workings of the Patents and Trademark Office and traditions of patent law that date back over 200 years. But in the ensuing 18 to 24 months, while they are deciding, a highly charged political debate will unfold. Issues that clearly transcend science alone will be aired, including matters of ethics, law, social value, economic return, international competition, as well as the relationships among government, federally-funded academic research and industry. Indeed, there may be no better example of the politics of knowledge, or the politics of NIH.

These and many other matters will also require us as a community to participate broadly in the complex world of politics and public policy: conflict of interest of federally-funded investigators; federally imposed confidentiality requirements imposed on premature release of research data in multicenter cooperative studies funded by NIH due process and confidentiality in government investigations of accusations of scientific misconduct; the impact of

sensitive and contentious social issues such as sex and abortion on the conduct of biomedical research; privacy rights and human genetic data; public accountability of federal funds allocated to cover the indirect cost of research performed outside of government.

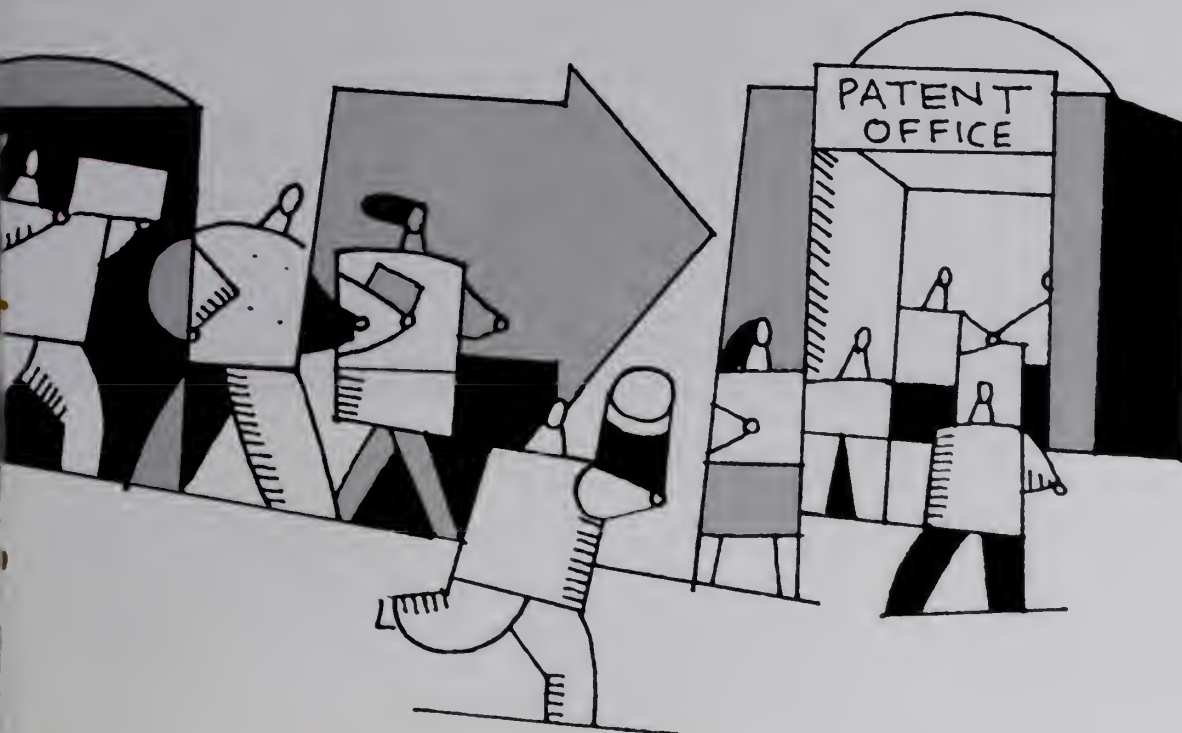
Each of these issues, and many more, spark controversy, dissent, fear, anger, frustration, public attention, media coverage and the interest of elected public officials. But, the sparks are also derived from a \$10 billion success story that has become vital to American life and therefore active on the playing field of American politics.

In 1893 Henry Adams traveled from Washington to Chicago to "study the (Columbian) Exposition and stayed there for a fortnight absorbed in it." In his autobiography he described how "one lingered long among the dynamos, for they were new and gave history a new phase." To Adams, the dynamo became a symbol of infinity—a leap as if to a new dimension.

A modern medical historian might well see molecular biology as today's dynamo—an inspiring leap forward in

the continuity of medical progress. But its ultimate worth will be proved by how successful we are in using this dynamo to alleviate human suffering and also to strengthen this nation's economy. ❧

Bernadine P. Healy '69 is director of the National Institutes of Health. Last December, at the invitation of Dean Daniel Tosteson, she presented this talk on biomedical research to the Harvard Medical Center.







The Tuskegee Legacy

by Ruth L. Fischbach

JOHN WILLIAMS, A BLACK MAN WHO lives in the inner-city, has AIDS and has been asked by his physician to participate in a clinical trial of a new therapy. The physician reacts with surprise, disappointment and bewilderment when Mr. Williams not only refuses to participate, but responds with a torrent of hostile invectives against the medical establishment.

While well-intentioned, this physician neither grasps nor understands the extent of distrust of the medical and scientific establishment harbored by many within the black community. Nor does he recognize the basis for conspiracy theories that liken AIDS to a form of genocide against blacks. This failure to appreciate the experiences of African Americans as subjects of scientific investigation poses a formidable barrier to equitable and just care.

The year 1992 marks the 20th anniversary of the whistle being blown on what historian James Jones, in his book *Bad Blood: The Tuskegee Syphilis Experiment—A Tragedy of Race and Medicine* (The Free Press, 1981), calls

“the longest nontherapeutic experiment to be sponsored by the United States Public Health Service” and “the most notorious case of prolonged and knowing violation of subjects’ rights.”

Named after the Tuskegee Institute and the town in Macon County, Alabama where the “experiment” was conducted, the “Tuskegee Syphilis Study: the Study of Untreated Syphilis in the Male Negro” began in the fall of 1932 and continued for 40 years. While the results of the study were being routinely reported in medical journals, public knowledge of the government researchers’ actions came only when Peter Buxton, an investigator with the Public Health Service, described the study to an Associated Press reporter after attempting for six years, unsuccessfully, to alert the PHS to the moral concerns raised by the study. It was front-page news across the nation. The study was terminated and an initial series of congressional hearings chaired by Senator Edward Kennedy was convened.

The actions of the government researchers involved raise a panoply of issues that force us to confront, however painfully, the disrespect and disregard for the humanity of experimental subjects that can occur when the quest for knowledge super-

Yazoo Delta
Courtesy of the Dorothea
Lange Collection. The City
of Oakland, The Oakland
Museum, 1938.

sedes principles of scientific morality. It is vitally important to convey this message to scientists and others involved in the biomedical arena so that all remain vigilant to dilemmas that invite compromise of ethical standards. Knowledge of the facts of the Tuskegee study is essential if we are to understand the current climate of clinical research, where distrust of health officials by blacks is particularly pervasive.

Beginning in 1928, the Julius Rosenwald Fund, a philanthropic organization dedicated to the promotion of the health, education and welfare of black Americans, sought to collaborate with the Public Health

Service to test for syphilis in a sample of southern rural blacks, and then to provide treatment to those who tested positive. For the next two years, the PHS ran testing programs in six counties to estimate the prevalence of the disease, finding that in the county of Macon, Alabama, 35 to 40 percent of all age groups tested positive, and 99 percent had never received treatment.

Unfortunately, the 1929 stock market crash and the Great Depression that followed demolished the financial resources of the Rosenwald Fund, preventing the treatment phase of the plan from going forward. In an attempt to salvage something beneficial from their efforts, a decision was

made to make use of this "unusual opportunity" by conducting a prospective "natural" experiment using living patients. Coincident with these events, a retrospective study of medical records of white males with untreated syphilis residing in Oslo, Norway was published in 1929. Findings of this study indicated that cardiovascular damage was a common complication whereas neurological involvement was infrequent.

This conclusion, contrary to the perspective held in the United States, provided a rationale for a longitudinal study of a group of American men with untreated latent syphilis. The afflicted men of Macon County provided a second irresistible rationale: to determine the course of untreated syphilis in black men. Paradoxically this goal was supported by some black physicians who wanted to prove that the disease did not differentiate along racial lines.

Allan Brandt, in a seminal, extensively documented article about the study in the 1978 issue of the *Hastings Center Report*, wrote that this decision was facilitated by blatantly racist beliefs based on "The premise that blacks, promiscuous and lustful, would not seek or continue treatment...The USPHS presumed the men would never be treated"; and the conduct of the study made that presumption "a self-fulfilling prophesy." For, as Brandt states, the entire study was predicated on nontreatment.

Our history of ethics of human experimentation is relatively recent, dating back only to World War II and the Nuremberg Trials, which exposed in exquisite detail the extent of man's inhumanity to man, how the medical

U. S. PUBLIC HEALTH SERVICE



This certificate is awarded to

In grateful recognition of 25 years

of active participation in the

Tuskegee medical research study.

Awarded 1958



LeRoy E. Burney

Surgeon General

Participants in the Tuskegee Syphilis Study were offered \$50 to cover burial expenses, and a certificate of appreciation.

profession can be subjugated as a tool of government, and how experimental subjects' rights as human beings can be scorned and their bodies exploited. The evidence presented at the trial—and written up in detail by Leo Alexander, MD in *NEJM*, "Medical Science Under Dictatorship" (1949; 241: 39-447)—was dramatic and shocking.

Most investigators in the United States learning of the Nazi atrocities were convinced that something like this would never happen here. That our own Public Health Service would devise an experiment that relied on a sustained series of deceptions and exploitations, indeed even blatant lies, was not conceivable and perhaps still is not.

But violations in the ethics of human experimentation were apparent in the Tuskegee study right after the decision was made to follow a sample of 412 men with syphilis and a control group of 201 men to "end point"—autopsy. To begin, there was the issue of informed consent: the men were never advised that they had a contagious disease called syphilis and that they were participants in an experiment. Rather, they were recruited by being intentionally misinformed that they would be treated for their "bad blood," a colloquial term representing a series of maladies, including syphilis.

Diagnostic spinal taps for neurosyphilis, euphemistically called "backshots," were misrepresented as a "special free treatment," administered "for their own best good." Another breach of ethics occurred when men initially in the control group who subsequently became infected were moved to the "experimental" group. They too were not treated—even after penicillin was shown to be effective for latent syphilis. Families were never warned about contagion. And indeed, there is no mention of the wives of these men who became infected and during pregnancy unwittingly transmitted the disease to their fetuses.

More than withholding treatment without informed consent, the men were actively prevented from receiving treatment since treatment would end the study. They were removed from clinics where they sought care, local physicians were advised not to treat them, and even the local draft board was ordered not to call up the men in the study for a pre-induction physical, which would have revealed their condition. Particularly onerous was the motivation of government scientists to publish morbidity and mortality statistics expressly designed to promote fear of the disease among the populace in order to increase incentives to fund the ongoing study.

*The men were
actively prevented
from receiving
treatment since
treatment would
end the study.*

Is there a basis to the charge of genocide? Data were conclusive from the first survey completed in 1936 and presented that year at the American Medical Association meeting. Syphilis tended to greatly increase the frequency of cardiovascular manifestations; only 16 percent of subjects gave no sign of morbidity as opposed to 61 percent of the controls. By 1946, it was concluded that life expectancy was reduced by 20 percent and by 1955, that percentage had increased to slightly more than 30 percent who died directly from advanced syphilitic lesions of either the cardiovascular or the central nervous system (*Journal of Chronic Diseases* 1955; 1:27-48). In 1951, penicillin became the standard

treatment for syphilis. The study was not ended until 1972.

Equally unsettling was the attitude of the investigators toward the subjects, judging by the correspondence of D.O. Wenger, MD, chief of the federally operated Hot Springs, Arkansas venereal disease clinic, who wrote "we have no further interest in these patients until they die" (cited in Brandt). In a 1976 interview with Jones, John Heller, MD, the director of venereal diseases at the PHS from 1943 to 1948, stated "The men's status did not warrant ethical debate. They were subjects, not patients; clinical material, not sick people" (cited in Stephen Thomas and Sandra Crouse Quinn, *AJPH*, Nov. 1991).

Today, scientific research conducted on human subjects must adhere to strict guidelines. The cornerstone is the Nuremberg Code, composed in 1949 from the ashes of the crimes committed against humanity during World War II. Consisting of 10 basic principles, the code specifies what must be observed to fulfill moral, ethical and legal concepts. First and foremost is the conviction that voluntary consent is absolutely essential; voluntary withdrawal is also sanctioned.

The Tuskegee study did have a beneficial effect, albeit unintended: it led to the establishment of a national commission, chaired by Kenneth J. Ryan '52, that was delegated to "identify the basic ethical principles that should underlie the conduct of biomedical and behavioral research involving human subjects and to develop guidelines which should be followed in accordance with these principles." The product that emerged was the Belmont Report (1979).

Three ethical principles were identified as relevant for research involving human subjects: (1) respect for persons (acknowledges autonomy for those who are capable of deliberation and protection for those with diminished autonomy). Respect for person is predicated on voluntary consent based on adequate information. (2) Beneficence

is an obligation to above all do no harm (nonmaleficence) as well as to secure the well-being of subjects in which possible benefits are maximized and harms are minimized. (3) Justice, the final principle, deals with who receives the benefits as well as bears the burdens of research and is predicated on "fairness in distribution."

The Belmont Report presented the historical significance of Tuskegee stating that "in the 1940s, the Tuskegee Syphilis Study used disadvantaged, rural black men to study the untreated course of a disease that is by no means confined to that population. These subjects were deprived of demonstrably effective treatment in order not to interrupt the project, long after such treatment became generally available." Researchers are extolled not to systematically select subjects because of their easy availability, compromised position, or manipulability.

In 1985, the Public Health Service Act was ratified with established institutional review boards (IRBs), committees organized to review any research project involving human subjects. The act also established a process for the NIH to respond to violations of the rights of human subjects of research. Most recently, in August of 1991, the Code of Federal Regulations was issued. Known as the "Common Rule," these regulations are wide-ranging, defining policies for the variety of research topics including how subjects are to be protected whether they be pregnant women or fetuses in and out of the uterus. What makes the Common Rule so important is that it unites for the first time 15 government agencies from the Department of Agriculture to the Department of Veterans Affairs under one set of explicit policies.

The use of drama brings to life theoretical and historical issues. *Miss Evers' Boys*, a moving and provocative docudrama of the Tuskegee study, depicts how conflicting professional obligations and motivations tainted

with racial bias can cause good people acting in relatively good conscience to do harm. Written by David Feldshuh, a physician, the play raises issues that are extraordinarily relevant to today's research environment involving human subjects.

In April 1992, a concert reading of excerpts from this play was presented at HMS to serve as the opening event for the Harvard Program in the Practice of Scientific Investigation. Eunice Evers was portrayed by Byllye Avery, visiting fellow in health and social behavior at the HSPH; Allan Brandt, Amalie Kass Professor of Medical History played Dr. John Douglas; Felton Earls, professor of

*I do not believe
that the Tuskegee
Syphilis Study is an
isolated event in our
history of human
experimentation.*

human behavior and development at HSPH and HMS professor of child psychiatry portrayed Dr. Eugene Brodus; and Willie Johnson was played by MD/PhD student Mark Johnson.

After the reading, the actors discussed with the audience that it was painful to play their parts, yet it provided them an opportunity, as Mark Johnson put it, "to say something to you about the historical experience of African Americans." And indeed, the reading was the catalyst for a catharsis, an outpouring of emotion and personal experience.

The Program in the Practice of Scientific Investigation has been developed by the Division of Medical Ethics to increase understanding of how established institutional guidelines and

ethical standards apply to actual research situations. The program also fulfills the NIH/ADAMHA mandate for National Research Service Award Institutional Training Programs to have as an integral part of an investigator's training a program in the principles of scientific integrity. The discussion that followed the reading of *Miss Evers' Boys* was profound, emotional and provocative. It surely would have opened John Williams's physician's eyes.

I do not believe that the Tuskegee Syphilis Study is an isolated event in our history of human experimentation. Henry Beecher, in his classic 1966 *NEJM* article, which many describe as a bombshell, confronted us with a litany of ethical errors that had taken place since Nuremberg. We must challenge ourselves to keep the lessons of Tuskegee in focus. Drug trials from thalidomide to tacrine, revelations about silicon breast implants, Dalkon intrauterine shields, CIA testing of LSD on unsuspecting individuals, and even the exclusion of women and minorities from clinical trials suggest that serious breaches of research ethics continue to occur.

We must be vigilant to guard against future Tuskegees. We must ensure that in our striving to satisfy scientific curiosity, motives are not corrupted by profits, actions are not blurred by bias, and values are not perverted by expediency. ❧

Ruth L. Fischbach, PhD is HMS assistant professor of social medicine in the Department of Social Medicine. She is also affiliated with the Division of Medical Ethics, where she serves as coordinator of research programs, and is the co-director, along with Lynn Peterson, MD, of the Program in the Practice of Scientific Investigation.

Miss Evers' Boys

by David Feldshuh

The Characters

EUNICE EVERS, 28, a public health nurse
DR. EUGENE BRODUS, 40,
Administrative Head
DR. JOHN DOUGLAS, 34, field physician,
United States Public Health Service
WILLIE JOHNSON, 19, a tenant farmer
CALEB HUMPHRIES, 25, a tenant farmer
HODMAN BRYAN, 37, a tenant farmer
BEN WASHINGTON, 57, a tenant farmer

All the characters except for DR. DOUGLAS are African American.

Time

Act One:

1932—Contagion

Act Two:

1946—Progression

1972—End Point

Place:

Tuskegee, Alabama

Setting:

The physical setting for Miss Evers' Boys is the Possum Hollow Schoolhouse, located in a rural area outside of the town of Tuskegee in Macon County, Alabama. This type of wooden, whitewashed, one-room school was constructed in the South by a New York foundation dedicated to the education of Negro youth. The interior of the school reveals two benches and a table, a cracked blackboard and a rope to an exterior bell. In the open space in front of and around the school, other suggested and emblematic settings present themselves. Finally, there are changing "testimony areas," closely defined by light and meant to suggest that testimony is being offered inside the schoolhouse to members of a Senate subcommittee investigating human experimentation in general and the Tuskegee study in particular in 1972.

The theatrical setting of Miss Evers' Boys is the conscience and memory of Eunice Evers. At times Evers is pulled into the world of testimony before scenes end, or out of testimony after scenes begin, resulting in a style and structure that are intentionally nonnaturalistic.

Act One

Prologue

1972. Outside the Possum Hollow Schoolhouse. During the following prologue we see Hodman, Ben, Caleb and Willie cautiously entering the schoolhouse, not knowing what to expect. All except Ben have attended this school for various periods of time. They feel and look incongruous in the miniature schoolhouse setting. Hodman carries an empty metal oil drum supported by a sling over his shoulder. Ben carries a washboard with a kazoo and assorted bells fixed to the top. Caleb carries a harmonica embedded in a home-made, tin-can megaphone. As the men enter, they create shadows in the schoolhouse. We hear glee music increasing in volume as Evers speaks her testimony.

EVERS (*fervently*):

I solemnly pledge myself before God and in the presence of this assembly—

To pass my life in purity and to practice my profession faithfully;

To hold in confidence all matters revealed to me in the practice of my calling;

To abstain from knowingly administering any harmful medicine;

To do all in my power to maintain the standard of the nursing profession;

To endeavor with loyalty to aid the physician in his work;

To devote myself to the welfare of those patients committed to my care.

I've recited that pledge a thousand times, Senator, I know it by heart.

Blackout on Evers, Music out. Lights up sharply on the men.

Scene 1

1932. Inside the Possum Hollow Schoolhouse. Early evening.

HODMAN (*troubled*):
Parakeet?

WILLIE:
What?

HODMAN:
Parakeet. He say I got bit by a parakeet.

CALEB:
Who did?

HODMAN:
Kirk up at the main house.

BEN:
So what.

CALEB:
What that white trash know.

HODMAN:
He know enough to own your land and mine. Kirk say something, you do it.

CALEB:
Do what?

HODMAN:
Stay put. That's what. Stay put in this stinky schoolhouse till the government bad-blood doctors come. That's what Kirk say.

BEN (*anxious*):
Doctor going to be here?

CALEB:
How that doctor gonna know if you got bit by a parakeet?

HODMAN:
Kirk say we gotta give out our blood.

CALEB:
Give blood?

HODMAN:
That's how they know.

WILLIE:
Not me. They ain't stickin' me.

CALEB:
I ain't given' up my blood, I'll tell you that.

HODMAN:
Kirk says you have to.

CALEB:
I hate that bastard.

BEN:
Be quiet Caleb.

CALEB:
Why? No one around?

BEN:
Feels to me like there is.

CALEB:
Well there ain't.

BEN:
My neck is itching.

CALEB:
Stop that talk.

BEN:
Artone Green got swung not two miles from here.

WILLIE:
Don't be talking about that, Ben.

BEN:
Well, my neck is itching.

HODMAN:
Then scratch it and be quiet.

CALEB:
Come on, let's get out of here. We'll do the gillee practicing over to my place.

HODMAN:
Kirk want us here.

CALEB (*commanding*):
I say, let's go. Now. (*He begins moving towards the door.*)

HODMAN (*stopping him, sharply*):
Kirk want us here.

They stand, waiting.

WILLIE (*concerned*):
Grandpa say they took his blood...He was soft for a week.

HODMAN:
What you mean?

WILLIE:
He say that blood-taking make it so he couldn't do nothing with no woman no how for no whole week.

BEN:
Not taking my blood then.

CALEB (*to Hodman*):
No one can make you give up your blood.

HODMAN:
Kirk can.

BEN:
If you want to keep farming.

CALEB:
Hell, I don't.

BEN:
What else you got?

Caleb turns and starts to leave. Hodman sits.

HODMAN:
If you know what's good for you, you'll sit and wait and keep your mouth shut.

CALEB:
Not me. Come on, Ben, let's go to the Crimson.

BEN (*sits*):
I'm too old to be fightin' that kind of fight, Caleb.

CALEB:
That man says jump, you jump.

BEN:
Might be nothin'. Might be over in an hour.

CALEB (*to Willie*):
What about you, Willie?

Willie sits.

WILLIE:
I'm staying.

CALEB (*He pounds long and angrily on the oil drum, yelling with unsuppressed rage.*):

Jump, jump, jump, jump, jump, jump, juuuuump.

BEN:
Caleb, let's not be fighting a fight we ain't gonna be winning.

CALEB (*disgusted*):
Man says jump, we all jump.

He joins them. The four sit. And wait. Lights dim on men. Lights up on Evers.

EVERS (*at testimony*):
That's kind of you to say so. Hats are a favorite thing of mine...I always tell my patients: when you put on a hat, you change the top of your world....(*not a question*) Senator, you know what it's like to drive to a place with good news on your lips. That's what I had. That night, for those men. That night I was wearing my good-news hat. I was bubbling. I was singing.

Lights up on men as Evers finishes her testimony. Looking for something to do. Caleb pulls the rope going to the school bell; it sounds loudly.

. . .

CALEB:
Nurse Evers...

EVERS:
Yes, Mr. Humphries.

CALEB:
Kirk send you here to take blood?

EVERS:
No, Mr. Humphries, Kirk didn't send me here. Ain't no white man sent me. A colored man, a fine and important man, Dr. Eugene Brodus, up at Tuskegee, he sent me. To offer you all free doctorin'.

The men are suspicious.

BEN:
Free?

CALEB:
You say "free."

EVERS:
Yes, I did. Free and fine as any you can get with any kind of money.

HODMAN:
I don't want my blood took. I got...obligations. I don't care about "free." And I didn't get bit by no parakeet. None of us did.

EVERS:
Parakeet?

HODMAN:
Kirk up at the main house said you'd see if we got bit by the parakeet that causes bad blood.

EVERS:
Oh. That man was wrong.

HODMAN:
I knew it.

EVERS:
He meant "spirochete." That's the germ that causes bad blood.

HODMAN:
I didn't get bit by nothing.

EVERS:
Well now, that's hard to tell. Sometimes you don't know—

HODMAN:
We know—

The men agree.

EVERS (*cutting them off*):
Until it's too late. (*selling the idea*) But the government, the United States government I'm talking about now, in Washington, is sending us the best medicine to treat anyone in this country that needs it. Even if you're poor, if you got bad blood, you're going to get the chance to be treated. Now that's something. And that's what I drove here to tell you.

CALEB:
How come they never interested before?

BEN:
We never got free doctorin' before.

EVERS:
Well, they're interested now.

CALEB:
Why us?

EVERS:
We got a chance to get people well on government money. We got to take it.

Pause.

BEN:
I don't think I got bad blood. But I got bad rheumatism.

. . .

WILLIE:
Nurse Evers, what you mean, "until it's too late"?

EVERS:
Pardon?

WILLIE:
You said we might not know "until it's too late."

EVERS:
That spirochete germ can make trouble with your heart. And with your head. And with your muscles and movement.

WILLIE:
You mean like how you walk or dance or something like that?

EVERS:
It can make it so you don't know where your feet are going. You can hardly walk. You shuffle.

WILLIE:
That's bad.

EVERS:
It can kill you.

WILLIE (*quietly to Caleb*):
I told you we ought to get us some life insurance.

CALEB:
You ain't sick. Not the way you dance. A dance suddenly erupts between the two men.

EVERS (*cutting them off*):
But the sneaky thing about bad blood is that you all might have it right now and don't even know it.

. . .

EVERS:
Those men won that Victrola. [The Victrola Gillee Competition] Hands down. And they got their blood took as well. Three thousand men tested. Six hundred and twenty-six positive for syphilis. Including Miss Evers' Boys. Yet, there were other places, colored and white, with just as much syphilis. When the government chose Macon County, well, we just figured our turn for good times had finally come....The following week treatment began for a two-year course of mercury body rubs and arsenic injections.

That was the best treatment available at the time. Eighty-five percent effective. It could cure you. If it didn't kill you first.

Sound of train whistle as Dr. Douglas enters. He is wearing a fine suit and carrying a new doctor's bag.

EVERS:

Two months later, the doctors arrived.

Another train whistle. Set and lights change. The men move into the new scene.

...

Scene 3

Memorial Hospital. The office of Dr. Eugene Brodus. Evers waits, listening. Four months have passed.

DOUGLAS:

There's no more money, Dr. Brodus. It's as simple as that.

BRODUS:

And if it were Manhattan and not Macon?

DOUGLAS:

Dr. Brodus, I'm just telling you what I've been told to tell you. Washington tells me, I tell you. I'm as disappointed and frustrated as you are. I've given six months to this project.

BRODUS:

Yes, you have. (*polite but cool*) Thank you.

DOUGLAS (*stung*):

I'm just reminding you whose side I'm on.

BRODUS (*even more polite*):

Thank you, then. For reminding me.

DOUGLAS:

It's simply too much disease for the budget.

EVERS (*as testimony*):

"Too much disease for the budget." That was the message. And that we were hanging onto Washington's attention by a single thread. Dr. Douglas called that thread "a suggestion."

DOUGLAS:

Just a suggestion. A temporary solution. A way to salvage this situation until Washington appropriates more funds. For treatment. (*dedicated*) What we might have here, in Macon County, is an extraordinary opportunity to catalogue the effects of untreated syphilis in the Negro.

BRODUS:

Untreated syphilis?

DOUGLAS:

The most important study of its kind ever conducted. More important than the Oslo research because we'd be dealing with living subjects.

EVERS (*as testimony*):

In Oslo, Norway, they had studied the records of three hundred Caucasian patients with untreated syphilis. To see what the disease did to them. They had studied the Caucasian. Now they wanted to study the Negro.

BRODUS:

Those patients need treatment.

DOUGLAS:

And who is going to get it for them, if not us? We follow these patients for six months, a year, two years at the most. We catalogue what this disease is doing to them. And then we let the facts speak for themselves. The Public Health Service will use those facts to create new priorities. New money. For treatment. Not just for our patients but for every syphilitic in the country. A revolution in health care. (*dedicated*) And our research could prove conclusively that the disease differentiates along racial lines.

BRODUS (*stung, forgetting himself*):

It might prove the opposite. It might prove that this disease affects both races in the same way, in exactly the same way. And that the so-called differences are predicated on sampling carried out by researchers whose own bias is so ingrained as to become unnoticed.

DOUGLAS (*surprised, but knowing when not to argue*):

Possibly.

BRODUS:

What would your role be, Dr. Douglas?

DOUGLAS:

I'd coordinate all the data and come down periodically for examinations. Liaison between Washington and Macon.

BRODUS:

Physician and scientist.

DOUGLAS:

Yes.

BRODUS:

That can be an uneasy combination.

DOUGLAS:

Isn't that how you see yourself?

BRODUS:

I'm a skeptic, Dr. Douglas. I'm the Voltaire of pelvic literature.

DOUGLAS:

You have some doubts?

BRODUS:

Yes, I do... Washington wants to match Oslo?

DOUGLAS:

Absolutely.

BRODUS:

Then tell them to study the Negro in exactly the same way Oslo studied the white. Equal.

DOUGLAS (*dealing*):

Dr. Brodus...every patient in our study would have a spinal tap to test for neurologic syphilis. Just like Oslo. Equal... Washington needs your help, Dr. Brodus.

BRODUS (*considering*):

Six months or a year?

DOUGLAS:

Two years at the most. Just until we get more money for treatment.

BRODUS (*after a few moments*):

All right.

DOUGLAS:

Good. (*with new energy*) We'll need new blood work—

Evers interrupts, unable to remain silent.

EVERS (quietly trying to separate Brodus from Douglas):

Dr. Brodus, I promised the men treatment. Now we just going to let 'em go? Just leave 'em with nothing?

BRODUS (*to quiet her*):
It's not nothing.

EVERS:
It sounds like nothing to me.

DOUGLAS (*continuing*):
We'll need baseline blood work first.
Then the spinal taps.

EVERS (*interrupting*):
The patients don't know what a spinal tap is, Dr. Douglas. And when they find out it's not treatment, they won't come.

DOUGLAS:
Then they can't find out.

EVERS:
You explain it to them. That it's for their own best good. Maybe then they'll come.

BRODUS (*gently*):
Better call the spinal tap something else, Nurse Evers.

EVERS:
Dr. Brodus, if we—

DOUGLAS:
The patients must believe that nothing has changed.

EVERS (*disbelieving*):
What about contagion?

DOUGLAS:
Any patient found contagious is taken out of the study. And treated.

EVERS (*to Brodus*):
And the mercury rubs?

DOUGLAS (*gently*):
Use heat liniment, Nurse Evers.

EVERS (*caught in the middle*):
Heat liniment?

Pause.

DOUGLAS:
Nurse Evers, those men need help. Don't they?

EVERS:
Of course they do.

DOUGLAS:
Would fifty dollars be of help to those men?

EVERS:
Fifty dollars is a lot of money in Macon County, Dr. Douglas.

DOUGLAS:
Would fifty dollars life insurance convince those men to stay with the study?

EVERS:
Life insurance?

DOUGLAS:
For burial.

EVERS:
A decent burial would mean a lot to those men. They're buried in feed sacks by the city dump.

DOUGLAS:
As long as the program continues any study patient that dies for whatever reason receives fifty dollars life insurance. Washington could find that much money. If it would help.

BRODUS (*quietly*):
You'll be able to care for the patients and their families and take those men to the hospital free of charge if they get sick and know that they're all signed up, right up front, first in line. When the treatment money comes through... (*privately*) We have one thread tugging at Washington's money. If that thread breaks, then we have nothing. Really nothing.

EVERS:
I'm afraid to let those men go. And I'm afraid to hang on to them.

BRODUS:
Push past that fear.

EVERS:
I can't.

BRODUS:
We don't have a choice here.

EVERS:
First in line?

BRODUS (*a guarantee*):
First in line.

EVERS (*after a moment*):
All right.

BRODUS:
Good.

DOUGLAS (*suddenly, a solution*):
Back shots.

EVERS:
What?

DOUGLAS:
We don't want to frighten the men. Better call those spinal taps "back shots."

. . .

Act II, Scene 3

Dr. Brodus's office. That night.

EVERS (*as testimony*):
The Silver Bullet. It was going to change the practice of medicine. Pneumonia. Cured. Meningitis. Cured. Rheumatic fever. Cured. Syphilis. Cured.... Penicillin. A national treatment program. And Washington promised my patients would be first in line.

Evers crosses to Brodus as he enters.

BRODUS:
That's not possible.

EVERS:
First in line. That's what we said.

BRODUS:
First we stop the disease from spreading. Washington wants us to treat contagious patients only. Patients who have had the disease three years or less.

EVERS:
My patients have waited the longest. They need penicillin the most. It would help them.

BRODUS:
It might. Or it might kill them.

EVERS:
Penicillin?

BRODUS:
The Herxheimer reaction. An allergic reaction that could kill those men with a single injection of penicillin. Washington is researching the question. To determine the degree of risk.

EVERS (*pressuring him*):
These men need all the help they can get. Right now.

BRODUS:

You can't hurry this kind of investigation. It's too dangerous. You make mistakes... You better look after those men. If the spirochete is embedded in the heart muscle and penicillin kills the germ, holes could be left in that muscle and the heart might disintegrate or explode.

Scene 5

Dr. Brodus's office. One week later. Evers, Brodus and Willie are present.

WILLIE:

Never thought I'd be standing in your office, Dr. Brodus.

BRODUS:

Well, don't. Sit down. No not there. Sit there in the big chair. Take off your shoes. Roll up your pants. Let's take a look at you.

Douglas enters.

DOUGLAS:

Hello, Willie.

WILLIE:

Dr. Douglas in town? Must be spring examination time.

DOUGLAS:

Nice to see you, Willie.

WILLIE:

You here to examine me, too?

DOUGLAS:

Yes.

WILLIE:

I'm riding in the front of the train for this one, ain't I?

BRODUS:

Willie, what's the problem?

WILLIE:

Nurse Evers tell you about my legs?

BRODUS:

Yes.

WILLIE:

That's the problem.

...

Willie exits.

EVERS:

He's getting worse.

DOUGLAS:

Nurse Evers. I understand your attachment to these patients. But unless we proceed in a professional manner we could be doing him a greater harm.

BRODUS:

Now hold on... Washington's assessment is that penicillin is only a small risk to these patients. Why not explain that to Mr. Johnson and let him choose? I think at this point he'd choose to be treated.

DOUGLAS:

We're not just talking about Willie. If we give one of these study patients penicillin and they die, other patients who could be helped by penicillin might refuse to be treated. What would we do then? And what about the study patients who are so desperate that they would choose to take any treatment regardless of the risk. Because they can't be objective. They don't have the understanding.

BRODUS:

Then give them that understanding. Maybe they won't choose to be treated. Maybe they don't want to take that risk. Maybe they do.

DOUGLAS:

It's not their decision. It's not ours. It's Washington's decision. They have to look after the safety of these men. We have six thousand patients, not in the study, to treat with penicillin right here in Macon County. That's enough to worry us for now.... I'll convey your thinking to Washington, Dr. Brodus. About letting the patients decide. He exits. Evers and Brodus wait.

EVERS:

Whoosh-shuffle. Slap, slap, shuffle... Soon I'll know it's Willie just by hearing how he walks up to the clinic door. The Slapwalk Shuffle in these old syphilitics. Old being forty-five... Dr. Brodus—

...

Scene 8

Dr. Brodus's office. Two months later.

Throughout the scene, Willie is quietly practicing and counting as he moves; at intervals he stops, only to start again with renewed determination; he is not part of the scene in the office. Evers is listening to Brodus and Douglas.

WILLIE (*dancing*):

One, two, over the top.

DOUGLAS:

If you waver in the middle of this project no one is going to trust you with future funding. Ever. And what about your determination to prove equality of response to this disease?

BRODUS:

It's been proven. Many times over.

DOUGLAS:

No. Not if the data is incomplete.

BRODUS:

Every time another patient, Negro or white, is cured with penicillin, it's proven again. The question is now irrelevant. There is no longer a need for this study.

DOUGLAS:

The need is greater than ever.

BRODUS:

Why?

DOUGLAS:

Fear. Raw fear in the right places. Personal fear among the powerful for themselves and their children. The national will to eradicate any disease depends on continuing fear... If one spirochete were found on a door handle or a water fountain or in a can of baby food, we'd have fear in the right places. But that is not the case. These men are all we have. Only by parading the devastation caused to these patients will we guarantee a national will fierce enough to stamp out this disease everywhere and completely and finally... We're treating thousands. Without fear, the funding for that treatment would evaporate. And the Macon money would be the first to go. Dr. Brodus, you need that fear more than anyone.

WILLIE:

One, two, over the top.

DOUGLAS:

Penicillin won't help them. The damage is done.

BRODUS:

It would stop them from getting worse... We're giving penicillin to every other syphilitic in the country regardless of how many years they've had the disease.

DOUGLAS:

They're different.

BRODUS:

How?

DOUGLAS:

They're not in the study.

WILLIE:

One, two, over the top. One, two, over the top—

DOUGLAS:

We cannot invalidate fourteen years' work and the sacrifice of all those patients with a single injection that might be useless or lethal.

BRODUS:

We have fourteen years of data.

DOUGLAS (*sharply*):

Fourteen years is not end point. It's scientifically incomplete if not taken to end point.

EVERS:

End point?

DOUGLAS:

If we're going to match the Oslo study, we have no choice. That's the decision that Washington has made. This study must go to end point.

EVERS:

And how far is that?

DOUGLAS:

Autopsy. The facts in this study must be validated by autopsy.

EVERS:

My patients shouldn't have to make that sacrifice.

DOUGLAS (*losing his patience*):

They already have. We're so close to unraveling the secrets of this disease. And each year we get closer. Because those few men have sacrificed for something greater than they'll ever understand. We owe it to these men to make this the best study possible.

EVERS:

I promised before God not to harm my patients. I promised before God to devote myself to the welfare of my patients.

DOUGLAS:

Nurse Evers... I'd appreciate a follow-up call to every physician in the Tuskegee area. Make sure they understand that they're not to treat those men with penicillin. By mistake. (*He exits.*)

WILLIE:

One, two, over the top.

EVERS:

I've lied to those men because you told me to. I've mislead them because I thought I could trust you with their welfare. Those men need penicillin. No one will help them if we don't.

BRODUS:

I understand your passion, Nurse Evers.

EVERS:

No one will help them if we don't.

BRODUS (*cutting her off*):

You think you're the only person who feels? You got your burden and I got mine. You serve the race in your way. I serve it in mine. I can't rock the boat while I'm trying to keep a people from drowning. There are trade-offs you can't even imagine. Don't you see that?

In the background, Willie's practicing becomes more desperate.

BRODUS:

You spend your time around the colored. Good. Well, I spend mine tip-toeing around the white. (*losing control*) But I ain't there to shine no shoes. And I ain't no Uncle Tom. And I ain't no shufflin' nigger. (*After a long while, he looks at Evers.*) Is that colored enough for you, Nurse Evers?

Brodus looks at Evers for a moment, turns and leaves.

WILLIE (*dancing*):

One, two, over the top.

Epilogue

1972. Outside the Possum Hollow Schoolhouse. A crisp American flag and a printed sign are tacked to the decaying wood. The sign reads: "United States Senate Testimony Site; Location: [written in by hand] Possum Hollow School; Date: [written in] April 24, 1972." Brodus and Douglas are sitting waiting to testify.

EVERS (*as testimony*):

Those that got out were safe. Mr. Willie Johnson left Macon county for Tipton County, Tennessee, in 1956. He got that hip shot of penicillin in Tipton and that's why he can use a cane now instead of crutches. Mr. Caleb Humphries got out too. He became a preaching man, with a traveling circuit. I lost track of them after they left Macon... We used to tell the men that this disease had three parts: you get it, you forget it and then you regret it twenty or thirty years later when it comes back to haunt you. That's how it's been with me too. I tried to stop thinking about it after 1946. The men were set apart from the thousands that were treated with penicillin and the study continued. "The Tuskegee Study of Untreated Syphilis in the Negro Male" had acquired a life of its own. It had become... familiar. Each spring I prepared a report on the number of patients remaining: four hundred and twelve in 1946; three hundred and sixty ten years later; one hundred and twenty-seven this year, 1972.

Evers sits. Caleb enters from the school on his way to get Willie. Caleb sees Douglas and stops.

CALEB:

You into pork, Dr. Douglas?

DOUGLAS:

That statement was taken out of context.

CALEB:

And a very down-home way of puttin' it: "A great hog has been made out of a very small pig."

DOUGLAS:

I was commenting on a statement by the mayor of Tuskegee; the original statement was not mine.

CALEB:

But very down-home it was, nonetheless. And you agreed with it. From listening to your testimony inside, I mean. And as soon as I heard what you said I knew I had to ask you one question.

DOUGLAS:

All right, what question?

CALEB:

You got any more pigs cookin'? 'Cause if you do I hope you learned the difference between treatin' and watchin'.

DOUGLAS:

Mr. Humphries—

CALEB:

Reverend Humphries.

DOUGLAS:

Reverend Humphries, those were not racial decisions: those were research options that were appropriate at the time.

CALEB (*stopping him*):

Don't get me wrong, Dr. Douglas. I don't think it was forty years of "garbage science" or whatever the newspapers are calling it. Because I got something useful out of all this.

DOUGLAS:

You did?

CALEB:

Fourteen dollars. And that certificate of participation for being a good patient for fourteen years. (*He takes out the certificate.*)

DOUGLAS:

That seems pretty useless to me.

CALEB:

Well, that's what I thought. But I searched for that certificate for two days when all this blew up. I said to myself, Dr. Douglas, I said: "I gotta find that certificate. I gotta find it and give it to my lawyer."

...

EVERS:

In the testimony today, there was a man gracious enough to wonder what effect the scandal, as he put it, might have on the public-health nurse who had worked with the participants and who lived in Tuskegee. "She has been known throughout the program as a selfless woman," he said, "who devoted her entire career to this project." And then he was kind enough to hope that it would "not be necessary for her to share any of the blame."

Well, now there's big blame and then there's little blame. The big blame—that seems to be going to the government and those doctors.

Some people in Macon are even saying the government gave those men that disease in the first place. I don't know. I don't know about that. I only know about the little blames.

It's the little blames that I'll have to be handling. Those are the blames that got nothing to do with talk about right and wrong and black and white and guinea pigs and money. Those little blames are when you go back to where you live, lived for your whole life, and catch your friends looking at you for no seeming reason, and people walk by you and don't say "good morning" and they don't use your name when they're giving you change as if using it would dirty their mouths some. Newspapers don't publish stories about these little blames but they mount up and they're strong and they push you to live a new way of life.

(*strong, not apologetic or self-pitying*) I loved those men. Those men were susceptible to kindness.

Distant music. The Cotton Club setting appears in front of the schoolhouse. The men become visible in the Cotton Club. They are everything they hoped they would be, but the image is dry, haunting and fragile. Willie dances, smoothly, smoothly in front of the other men. Evers looks then turns away. The music fades to silence. Willie's whispered patter and graceful dance continue.

WILLIE (*Dancing stage center*):

Da, da da, da, daaaaaa.

Lights fade.

End ♪

David Feldshub, MD, PhD is a professor of theater at Cornell University and artistic director of the university's Center for Theatre Arts. He practices emergency medicine.

Caution note:

Professionals and amateurs are hereby warned that Miss Evers' Boys by David Feldshub is fully protected under the Copyright Laws of the United States of America, the British Commonwealth, including the Dominion of Canada, and all other countries of the International Copyright Union and Universal Copyright Convention, and are subject to royalty. All rights, including professional, amateur, motion picture, recitation, lecturing, public reading, radio and television broadcasting and the rights of translation into foreign languages are strictly reserved. Particular emphasis is laid on the question of readings, permission for which must be secured from the author's agent in writing.

All inquiries concerning the amateur and professional production rights to Miss Evers' Boys should be addressed in writing to the author's agent, Helen Merrill, Ltd., 435 West 23rd Street, Suite 1A, New York, NY 10011, USA. No amateur performance of the play may be given without obtaining, in advance, the written permission of Helen Merrill, Ltd.

All inquiries concerning rights (other than production rights) should also be address to Helen Merrill, Ltd.

Hoe culture
Courtesy of the Dorothea
Lange Collection. The City
of Oakland, The Oakland
Museum, 1937.



Breaking the Glass Ceiling

by Frances K. Conley



Photo by Lilian Kemp

Frances K. Conley

Frances K. Conley, MD, professor of neurosurgery at Stanford Medical School and one of the nation's first female neurosurgeons, handed Dean David Korn '59 her resignation on June 1, 1991. Conley, 52, claimed in newspaper reports at the time that she had suffered a range of discriminatory comments from gender bias to overt acts of sexual harassment during her 25 years at Stanford.

A day before her resignation was to become effective, September 1, she changed her mind and decided to stay. This past year, Conley says she has gone through a political/personal transformation from trying to just be "one of the boys," to a national speaker on women's issues, including sexual harassment, and the treatment of women in academic medicine. During the Clarence Thomas/Anita Hill hearings, Conley's name was often mentioned.

This talk is similar to the Rothschild Lecture that Conley presented at Radcliffe College, October 1991.

OVER THIS PAST YEAR I'VE HAD A chance to depart from the world of neurosurgery and enter the world of feminist values.

I am going to address concerns I have for one-half of the population, a population that is unequally represented in many aspects of life. As announced in a bold headline on March 26, 1992 in the *Peninsula Times Tribune*, "women still get second-class treatment."

In a talk I once gave in the San Francisco area, I mentioned that *evolution* rather than *revolution* will produce the changes necessary to better the world of work and play for women. We can't expect a lifetime of prejudicial thinking to change overnight, and I have been unimpressed with attempts to legislate behavior. This particular audience was quite feisty and wanted to explore why women should be relegated to accepting incremental, slow changes to turn around their second-class citizenship.

I pointed out that, in many ways, women relegated themselves to their own predicament. Indeed, changes in society potentially would occur more rapidly if women would band together

*Evolution rather
than revolution will
produce the changes
necessary to better
the world of work
and play for women.*

and speak out as a unified voice in the political process. However, I am personally pessimistic this will happen soon; as the saying goes, "We just can't get our act together!"

Let's first consider some of the forces that act to prevent effective political action by a group that, by numbers and expertise, should wield incredible power. By tradition, our society is one that accepts social and legal institutionalization of the subordination of women to men. Since the days of Freud and others who followed him, women have been believed to be intellectually inferior to men, and men

have developed stereotypic role models to perpetuate their system of superiority. Thus, it has been expected and acceptable to think of women as inferior.

As beautifully stated in a letter to me from a professional woman, "Men learn from their earliest childhood that they are superior to women. They, the men, cultivate methods for keeping women in their place throughout their lives and the behavior becomes automatic for them. As women, society teaches us the same thing, that men are better than we are, and we believe it."

Because many women do believe that they are inferior to men, and because almost all women agree that as a group women certainly lack power, we have allowed a sexist veneer to overtake our educational and occupational environments to the degree that sexist behavior, comments and stereotypes have become the accepted cultural norm. For example, the professional woman in a group is always the one expected to pour coffee, take notes, or accept praise about her clothing and appearance rather than about her presentation or her

Engendering Gender Awareness at HMS

"...the feeling in the faculty is strongly against appointing a woman to be in a teaching position. ...it seems satisfactory [to us] to change the title from Research Assistant to Technical Assistant and to omit the name from the roster of instructors and simply have her name appear upon the payroll as do other technical assistants, stenographers, etc."

The instructor being so admirably discussed in the above letter from medical school Dean Christian to Harvard University President Lowell was the ambiguously named Dr. Willey Denis, whom the dean had just learned was

a woman, and the year was 1910. Today, over 80 years later, attitudes certainly have changed, and women are entering academic careers at Harvard Medical School with an increasing rate of success. Proclaims Eleanor Shore '55, dean for faculty affairs: "We're here!"

From 1987 to 1991, the number of full professors at the school doubled, from 11 to 22. The increases are just as significant in the lower rungs: in 1987, there were 60 female associate professors, compared with 110 in 1991; 185 assistant professors in 1987 rose to 236 in 1991; and final-

ly, 1,050 women entered training status in 1987, while 1,506 entered in 1991.

Numbers, however, do not guarantee success. Issues such as promotion into higher ranks, gender bias and sexual harassment, and general disparities between women and men in academia (and society) have prompted the school to establish methods to confront these problems.

Shore and Clyde Evans, PhD, associate dean for clinical affairs, explain that the goal for hiring and promoting women at the medical school is to hire at a percentage rate

accomplishments. Women are excluded from meetings or regarded as invisible.

Someone sent me a wonderful cartoon in the *New Yorker* depicting a board of directors meeting. The directors, all men except for a lone woman, are seated around an oval table and the CEO says, "That was a wonderful suggestion, Ms. Appleby, would one of the men care to make it?"

According to psychiatrist Terry Kupers, men also are victimized by the system. Men believe the only way to be productive, loved, virile and fully alive is to be powerful, and all of us define power in a very traditional, one-dimensional way: as power over others. Men take it as a personal insult if they fail the American dream of making it to the top, and after they get done kicking themselves for their failure and humiliation at work, they turn on their women and children.

It is the voice of authority, claiming objectivity, that has always told women what they should do and be. Kupers believes that power must be redefined, and not extended to those men who climb the ladder of success only to use their position to treat with derision all

those perceived as rivals and underlings. He states, "If men stopped feeling threatened by women's newfound sense of power, and were to redefine power as an integrating force rather than as a threatening one, then men would have a wonderful opportunity to break through the constriction and have more harmonious relations with women."

It would be equally advantageous for women to use power as an integrated process for the betterment of themselves as well as others. Unfortunately, the mere acquisition of power by women, let alone its use, will continue to be hampered by women's own perception of self, and the worth of that self as defined by society. By tradition, women, but not men, expect that part of becoming an adult is to lose identity as an individual, and that personal identity is replaced by becoming part of a couple. Women learn to define themselves by with whom they have been seen or by with whom they have slept.

As an exaggerated example, we have been told that the great Wilt Chamberlain, by his own admission, "serviced" 20,000 women, and Magic

Johnson, another 2,000—22,000 women who can brag and define their self-worth by the fact that they had sex with a superstar. The specter of AIDS stifled a bit the guffaw with which society greeted this information, and Martina Navratilova, another famous sports figure, reminded us none too gently that society's name for a woman with similar sexual proclivities would be slut, reiterating in a powerful way the double standard that remains alive and well in this country with regard to acceptable behavior for men and women.

But women do expect to gain much of their identity from a man and, at the same time, are willing to adopt his thinking, political and otherwise, in order to maintain harmony within the family unit. We still talk about a father "giving his daughter in marriage to her husband" as if she were property being offered by one man to another. Recently, the Japanese revealed that they used women as an essential, but expendable, commodity for their soldiers in much the same way that food, drink and clothing were provided for their military force. It is also known that many wives become physical as

that is comparable to the percentage of women nationally who are available at that academic level. Right now, at the levels of instructor and professor, the percentages are very close: 7.8 percent women in the pool of professors, and 6.7 percent hiring of actual HMS professional appointments in 1991/92; 40.4 percent in the pool of instructors, and 44.5 percent hiring for actual HMS appointments in 1991/92. The rates of internal promotions reflect similar comparisons.

The discrepancies, says Shore, occur between the levels of instructor and assistant professor. It's at that point that peo-

Pool of applicants compared to actual appointments and promotions at HMS for July 1, 1991 – June 30, 1992

| Rank | Internal promotions pool | Actual promotions | External appointment pool | Actual appointments |
|---------------------|--------------------------|-------------------|---------------------------|---------------------|
| Professor | 13.3% | 13.8% | 7.8% | 6.7% |
| Associate professor | 18.9% | 28.0% | 17.6% | 10.5% |
| Assistant professor | 34.4% | 30.7% | 28.4% | 19.2% |
| Annual appointments | 34.4% | 32.5% | 40.4% | 44.5% |

ple begin their research. It's also the time when women who choose to have children usually begin to take the time to do that. Consequently, they don't fill these ranks as quickly as their male counterparts.

"The brain doesn't go dead after an absence," however, says Shore. She compares women leaving to have children to men leaving to go to war, as they did in droves during World War II and the Korean War. Instead of having their academic careers suffer, women, like the men, should be able to return in full confidence and support to continue where they left off.

well as intellectual slaves, where independent thinking and behavior is forbidden and occasionally punished.

My own personal situation has been gloriously permissive. But, I too have recognized the force of societal pressures. For 23 years I had one name that formed my identity, that told me who I was; for the past 28 I have had another.

The man I married is handsome, well-educated, athletic and articulate. Prior to recent events in my life, when we would attend an affair as a couple, where neither of us was known by many at the party, the interest in us was always directed at him. Rarely, if ever, was I asked what I did and I have not yet stooped to wearing a t-shirt emblazoned with the words "I am a neurosurgeon, ask me!" Society dictates my function in life and it is to serve as a silent, decorative accoutrement at his side. Women are not permitted or expected to brag about ability, job title, or accomplishments, and it is equally impermissible for my husband to brag for me.

When I was the first female finisher in the huge cross-city Bay-to-Breaker foot race in San Francisco in 1971, I

Women are not permitted or expected to brag about ability, job title, or accomplishments.

was asked two questions after I crossed the finish line: "Are you married?" and "Where do you live?" The newspaper headline the next day read "Palo Alto housewife wins Bay-to-Breaker race." This was despite the fact that at the time, in addition to being a housewife, I was a physician almost finished with residency training in neurosurgery.

Because our world is defined by masculine terminology and expectation, women with careers frequently become adversarial with women who choose to remain at home. This attitude breeds resentment among women, dividing us so that there is no chance of our gaining momentum as a political force.

Following a talk I once gave back

East, the dean of a major educational institution told me that I had caught him. When asked his meaning, he said, "I have never asked the wives of my faculty (predominately men) what they do." I suggested that that line of questioning might turn up some very gifted, vital, creative individuals. He responded that he would be sort of mildly embarrassed, and wouldn't know how to continue the conversation if a woman said, in answer to his question, that she were a homemaker.

How have we, in this country, allowed homemakers to be regarded with such disdain? We carry this perception that women who devote themselves to raising children can't think, have nothing to contribute, and don't share common concerns with that population, composed of both men and women, who are gainfully employed: concerns about the environment, education, the crime rate, use of drugs and alcohol, the alarming rise in teenage pregnancies and teenage suicides.

I chose not to have children, and I contend that women raising children today are far more conversant with social ills than either I or their hus-

But when they return, they may encounter what Evans calls "disparate impact." When search committees review CVs, they naturally tend to be more attracted to what is most familiar to them: a record of progression and productivity that they recognize as important to a career in academic medicine. The CVs of women who have taken decreased workloads or time away from research to have children, may not reflect the same consistent level of productivity as the men applying for the same position. As a consequence the man may get the position because his track record is more in line with what the interviewers expect.

Part of what Evans's office tries to do then is to help those making hiring decisions understand how decreased productivity for a period of time may not reflect anything negative about the woman's abilities, but only that she worked at a reduced pace because of parental responsibilities.

Enter also the Annual Career Planning Conference (CPC). The CPC is just one of several "action-oriented programs to alleviate underutilization" that have been implemented in the past several years in cooperation with the school and the affiliated hospitals. The CPC is a mandated meeting for female

and under-represented minorities (African American, Hispanic, Native American) faculty members with their department heads (department heads may schedule a CPC with their male faculty, but are not required to) to discuss and plan the faculty member's academic career. The purpose is to ensure that the woman understands what she needs to do in order to stay on track, and that she gets proper guidance and instruction in doing so. "We're trying to plug up the holes," says Evans, "so people don't make bad decisions just because they're ill-informed."

Another factor, says Evans, is that HMS is a very competitive place. Therefore, not all of the available pool—the same way it is for men—are going to have the qualifications and commitment to research necessary to succeed at this school.

Evans also says that, just by simple logistics, true parity in numbers will take a while to achieve because the ratio of women to men in academic medicine has been unbalanced for so long. Medical school right now, says Evans, is approaching 50/50 male to female students, but it's going to take time for those people to reach faculty level.

bands. Mothers live these problems daily; I, at best, intellectualize them, and their husbands escape their immediate impact by working long, intensive hours. Yet, the political process rarely seeks the advice or expertise of women with children, nor does it allow them to share their grief as well as their glories in the roles they play. Both men and women are guilty of playing into and perpetuating this massive cultural inferiority complex.

God help the single mother who works—frequently not by her choice. And, if it were by her choice, she risks the wrath of the Quayles and Bushes of the world who say she is amoral and that she has caused the breakdown in the structure of the family and goodness of the values contained therein. Single moms are fair game in many workplace environments. They endure abusive and suggestive sexist comments, frequently receive less pay for equivalent work and then, in addition, have to justify their roles as fit mothers. Talk about a no-win situation.

The posture of those with power to effect change has been, according to feminist legal scholar Catherine

Both men and women are guilty of playing into and perpetuating this massive cultural inferiority complex.

McKinnon, “To make sure that what is done to women is never seriously challenged and that women never come first for anyone who could do anything to change it. Implicitly or explicitly, we are being told to shut up, lie down and take it, and to cooperate with the illusion that really we are having a wonderful time.”

It is time that women realize that they must be the ones to come first for themselves; learn to be selfish and to demand those things or actions that are essential for their own well-being. If one cannot help oneself, one cannot expect help from others. Too often women find comfort in the role of vic-

tim, a role that absolves one of any responsibility for what has happened, or for one’s life. Taking or accepting responsibility means work and risk, but often produces achievement and pride and can lead to empowerment.

John Leo has written, “The trick is to get the excluded voices of women back into the debate without falling into the countermyth of ‘anti-feminism,’ which simply wants women to shut up and go home. Instead of harping full time on the evil of men, these voices want to talk about intimacy, trust, equality, sharing, child care and a peaceful settlement in the battle of the sexes.”

It was readily apparent from the Professor Hill-Judge Thomas debate that members of the Senate are woefully ignorant of the trials and tribulations faced by many women in their workplaces. The senators also seemed to believe that their own pervasive privileges extended to everyone else. To apply the reasoning that one should just up and leave an unhappy, hostile or nonproductive workplace is to ignore economic realities faced by both single and married working women, with and without children.

The inherent conflicts in scheduling children into an academic medical career are multiple, and the sacrifices, both personal and professional, are many. Ten years ago, the number of children among the female faculty would inspire wonder as to whether these women had answered the call to celibacy rather than to medicine: there was only one child among 11 female professors. Today, Shore happily relates, both numbers are greater: 22 female professors have 27 children among them.

To help women better organize time and network with other women, the Women in

| Women in U.S. medical schools over 10-year period. Source: AAMC. | | | | numbers (percent) |
|--|---------------|----------------|----------------|-------------------|
| Academic year | Applicants | Entering class | Total enrolled | Graduates |
| 1970-1971 | 2734 (10.9) | 1256 (11.1) | 3894 (9.4) | 827 (9.2) |
| 1980-1981 | 10,644 (29.5) | 4970 (28.9) | 17,373 (26.5) | 3892 (24.8) |
| 1981-1982 | 11,673 (31.8) | 5343 (30.8) | 18,555 (27.9) | 3991 (25.0) |
| 1982-1983 | 11,685 (32.7) | 5445 (31.6) | 19,627 (29.3) | 4229 (26.7) |
| 1983-1984 | 11,961 (33.9) | 5659 (32.9) | 20,685 (30.7) | 4617 (28.3) |
| 1984-1985 | 12,476 (34.7) | 5705 (33.6) | 21,287 (31.7) | 4898 (30.0) |
| 1985-1986 | 11,562 (35.1) | 5788 (34.2) | 21,624 (32.5) | 4930 (30.8) |
| 1986-1987 | 11,267 (36.0) | 5866 (35.0) | 22,082 (33.4) | 5092 (32.1) |
| 1987-1988 | 10,411 (37.0) | 6087 (36.5) | 22,539 (34.3) | 5356 (33.7) |
| 1988-1989 | 10,264 (38.4) | 6205 (37.0) | 22,902 (35.1) | 5225 (33.5) |
| 1989-1990 | 10,546 (39.2) | 6404 (38.2) | 23,501 (36.1) | 5197 (33.9) |
| 1990-1991 | 11,785 (40.3) | 6499 (38.7) | 24,164 (37.2) | 5584 (36.0) |

This attitude also ignores the fact that men control virtually every aspect of most work environments, and they have the power to help or hinder the career advancement, or lack thereof, of any woman coming into their sphere of influence. But, if one considers the masculine power structure within hierarchical echelons of organizations, one realizes that the very top jobs are designed for those who have a wife—a reality that few women accomplish even with a supportive, cooperative mate.

The message received by women is that they must choose between career and family if they hope to be competitive for the very top; the message to men is that long hours, dedicated, selfless service at the expense of living is the requirement they must fulfill. Somewhere along the line in this country we have lost our sense of balance.

Successful women are threatening and are deemed less than feminine if they pursue a career with vigor and talent. A man who wants to participate in raising his children acquires the label of "wimp" for taking paternity leave when a baby is born, for leaving

at 5:00 PM to play with his children, or for being the parent responsible for nursing a sick child and missing work because of it. On a radio talk show last week, I heard a man call in and ask how he could deflect the ridicule he received for staying home to care for three children full time while his wife worked—an arrangement perfectly satisfactory to the two of them, but obviously not to society. What should he be told?

As a legacy of long-standing second-class citizenship, women are denied many choices. The one I find most hurtful, most intimate, is a woman's choice over what she does with her own body. The brouhaha over breast implants and their potential danger to a woman's health unleashed incredible hypocrisy. Magnanimously, women were told they had the right to decide for themselves whether or not to have implants. After all, there is a lot of money made on breast implants.

But what has happened to that same freedom of choice when it comes to using your body to develop a baby, when the implant consists of a fertilized egg rather than silicone?

Suddenly, male politicians take it on themselves to make that decision for us—not only male politicians, but other men whose bodies and careers are not affected by the process of pregnancy. In addition, there are women, who for reasons that are foreign to me, feel they also have the right to legislate what happens to another woman's body.

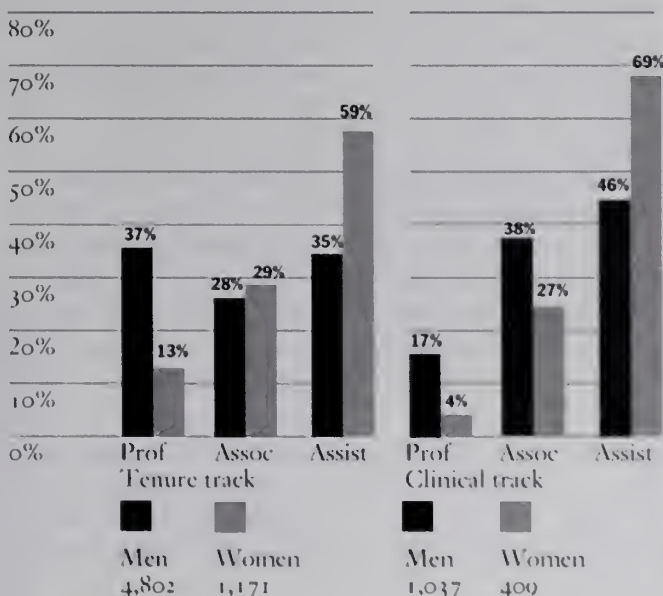
One of the most wonderful aspects about life in the United States is that we don't always agree with each other; there is allowable diversity of thinking. Choice does not mean an abhorrence of life, it permits different definitions of life. It is a choice I should have, whether or not to use my life in order to create another.

Women who believe that a twocelled structure is a sacred life already have the right to choose to bear that life, and no one will deny them their choice. As a biological scientist, I do not happen to believe that an amorphous, undefined conglomerate of cells represents a person with a claim on the sanctity of my body. I also deserve the right to choose what is best for me, just as a frightened, desolate teenager deserves the right to

Academic Medicine Network in 1982 was formed. The network has sponsored programming to address issues specifically relevant to women in academic careers. Monthly meetings—open to all faculty but targeted specifically to women—have been on topics as diverse as "Management Strategies and Styles for Women Physicians and Scientists," "Strategies for Developing a Successful Grant Application," and "Parenting Adolescents."

"One of the beauties of having the network," says Brenda Hoffman, associate director of the Office for Academic Affairs,

Male and female faculty from 13 U.S. medical schools, shown by their tracks (tenure or clinical) and academic ranks, 1991.
Source: AAMC Faculty Roster.



"is that it takes away the anonymity of being one of 11,000 faculty and fellows." Hoffman argues that, for the most part, women don't understand that succeeding in academic medicine—especially at a place such as Harvard, "where everyone is brilliant"—is a game. She argues that women really think that if they work hard, do all the right research, write all the right journal articles, that they'll make it. "That's not exactly true," she says. "Right now, women are not competing on an equal playing field culturally. So, we need to give them a little help."

Through competitive sports women are learning about mental commitment, a killer instinct, and a chance to be lauded as number one.

choose what is best for her own life. If women could agree with each other on this most basic of rights, and mount the political power that is present in our very numbers to assure this freedom of choice, equalization of power between men and women would come much closer to reality.

It might even mean an end to the type of comment made recently to a female medical student who applied for a position as a resident in a neurosurgical training program. She was told, "Your chances for acceptance into neurosurgery would be improved

considerably with a brain transplant coupled with a sex-change operation."

Are there any hopeful signs that this country has the capability of eliminating second-class citizenship for its women? To close on a positive note, I think there are and interestingly, they come from the world of athletics. In the 1992 winter Olympic games, American women finished higher than American men in almost every sport in which both fielded teams. Although women representing the United States constituted only 34 percent of the team number, they brought home 82 percent of the medals. Through competitive sports women are learning about mental commitment, a killer instinct, and a chance to be lauded as number one. For the first time ever we have an entire generation of American women who have been encouraged to pursue competitive sports from the time they were children.

Historically men have shown us that lessons learned from competitive athletics are applicable to many playing fields encountered in the passage called "life." Because of sports, women now are being prepared for their own life passage very differently than they

were in my generation. I expect much less submissive, acquiescent acceptance of the status quo by those who now know how the game is played.

I sincerely believe the future is bright, but we must not forget that in the present there are still many more mountains to climb and conquer. ❧

Frances K. Conley, MD is professor of neurosurgery at Stanford University School of Medicine and is chief of neurosurgery at the Palo Alto V.A. Medical Center.

Part of that help has also been the initiation of an Ombuds Office in 1991. Linda Wilcox, the ombudsperson, explains that, in general, her office was established to provide a safe, completely objective place for all members of the medical school community to come with problems in their workplaces. Specifically, however, Wilcox's office was begun to hear complaints of sexual harassment, racial and sexual discrimination, and to educate and increase sensitivity in the medical school community about these issues.

Wilcox says that many people come to see her seeking information. Sexual harassment is very strictly defined by law, explains Wilcox. Most situations actually fall under the category of gender bias—"the differential treatment of individuals based on their sex rather than on their personal characteristics, merit, or professional stature," as defined in a brochure produced by the Joint Committee on the Status of Women (JCSW) and Wilcox.

But, she speculates, fear of repercussions for reporting sexual harassment may keep people quiet. "What are the odds you're going to win versus the odds that you will be victimized twice?" challenges Wilcox. "Ask Anita Hill."

Currently, the formal guidelines for disciplinary action are being revised, and Wilcox is working with a faculty council committee to develop consistent procedures to hear complaints. Wilcox says she believes that the school would support someone with a valid charge of sexual harassment. By offering an informal way of confronting sensitive problems

via the Ombuds Office and having a formal grievance process firmly in place, peoples' fears about coming forward should be lessened. The hope is that a situation similar to what happened to Anita Hill, and to Frances Conley, won't be repeated at Harvard Medical School.

Terri L. Rutter

*Who is the true maker
of the Waterhouse clock?*

A Mystery Unwound

by Oglesby Paul and Richard J. Wolfe

IN THE SUMMER OF 1950, MRS. MARY (Ware) Sampson presented to the Harvard Medical School an old tall-case (grandfather) clock, which she had inherited from her great-grandfather, Benjamin Waterhouse. Benjamin Waterhouse (1754-1846) was a prominent and controversial founding member of the medical school faculty. He was the first Hersey Professor of the Theory and Practice of Physic, and was especially recognized for his pioneering introduction of smallpox vaccination into the United States, in 1800.

The door of the clock was distinguished by a round brass plaque that read: "The gift of the Honorable Peter Oliver D.C.L. late Chief Justice of the Province of the Massachusetts Bay to Benjamin Waterhouse MD, 1790." Because it was apparent that the decorative finials and fretwork were missing from the top of the case, Dean George Packer Berry authorized Assistant Dean Reginald Fitz to have these restored by a cabinetmaker. The clock, said to require winding only once or twice a year, was then installed in a corner in the Faculty Room,

named for the same Benjamin Waterhouse. Fitz was clearly intrigued by the new clock and attempted to identify where it was made and by whom. Fitz noted that there was no maker's name on the dial or case, and none was found in the movement. Sampson, the donor, wrote to Fitz on September 16, 1950 that Alexander G. Macomber, who had always cleaned, oiled, and wound the clock, "thinks it an old Willard. It is apparently the same in works as that owned by Dr. Locke which Mr. Macomber tells me Mr. duPont offered \$25,000.00 for but Dr. Locke kept it."

Edwin A. Locke of the Harvard Medical School faculty did indeed own a unique Simon Willard tall-case clock, which would go for one year between windings, and which was very similar, but not identical, to the Waterhouse clock. If Simon or one of the other Willards were the maker, the Waterhouse clock would have been made in eastern Massachusetts.

The most recent information on this issue came in 1980 in a book entitled *A Study of Simon Willard's Clocks* by Husher and Welch. Pages 229

through 237 of this handsome volume discuss Harvard's Waterhouse clock:

This clock, according to family notes, was furnished by Simon Willard and it supposedly ran all year on one winding. However, we found that the one-year duration was a misnomer and that it actually ran for six months per winding. We are inclined to believe that Willard sold the clock because he was the leading clock-maker in the vicinity of Harvard, he advertised one-year duration clocks, and the status of the Honorable Peter Oliver, who gave the clock to Dr. Waterhouse, would not be compatible with a supplier that was not the best. ... We have not been able to ascertain whether the movement was imported or whether it was made by Simon Willard. Unfortunately, we cannot insist that Simon made the movement in the Waterhouse clock because of the many design features which were not Willard's style.

The authors thus suggest that the maker of the case may not have been the maker of the movement. This possibility cannot be disproved, but appears unlikely in view of the evidence that follows.

The volume contains a full-length photograph of the clock with the incorrect description, "Six month tall clock signed by Simon Willard." Actually, there is no such signature. Husher and Welch seem to have made the judgment to include the Waterhouse clock in a book devoted to those undoubtedly made by Simon Willard on the shaky bases of unidentified "family notes," and the prominence of Judge Peter Oliver (who was in England when he gave the present). The authors also comment on its similarity to the Locke Simon Willard tall-case clock. Willard had indeed placed an undated advertisement inside the case of some of his tall-case clocks that described "clocks that will run one year, with once winding up, with very elegant cases, price 100 dollars."

We became interested in this minor enigma a few months ago when, while one of us (OP) was in Manhattan, he

had a conversation with William Doyle, an antique dealer who now owns Locke's Simon Willard clock. Doyle believed that Harvard Medical School owned the mate to his unique clock, that the HMS clock was therefore also a rarity, and as such was exceedingly valuable. An investigation, which included the Waterhouse papers at the Countway Library and source material at the Massachusetts Historical Society, seems now to have clarified this matter.

Peter Oliver, who donated the clock to Benjamin Waterhouse, was born in 1713 into a well-to-do Boston family. He attended Harvard College, where he got into trouble for stealing a goose and a turkey, and in the mid-1740s, established a successful iron works in Middleborough, Massachusetts. Although without legal training, he was appointed to a succession of judgeships, ending in 1772 with the position of chief justice of the Superior Court. A staunch loyalist, he became exceedingly unpopular with the activists of the time, and finally in March 1776 was forced to flee with British troops evacuating Boston by ship. He settled in Birmingham, England in 1778, and died in 1791.

Judge Peter Oliver had three children; the youngest was Andrew Oliver, born in 1746, who was married in 1769 to Phebe Spooner. Andrew Oliver died in Middleborough in 1772, having been married for only three years, but in that interval, he fathered three children. The eldest of the three, Elizabeth, was born in 1769 and was brought up in the Boston area by her widowed mother. In 1788, she was married in Roxbury to Benjamin Waterhouse, who had been educated initially in Newport, Rhode Island, later in London under Dr. John Fothergill, and in Edinburgh, ending with an MD degree from Leiden in 1780.

Judge Oliver was ill in Birmingham in 1788, and did not attend the wedding of his granddaughter. Indeed, he never returned to Massachusetts after his flight in 1776. Perhaps because the

granddaughter, whom he called Betsy, had been brought up without a father, and because he felt particularly responsible as a grandfather in absentia, Judge Oliver seems to have gone out of his way to send presents to the newlyweds. Two letters from him to his new grandson-in-law, Benjamin Waterhouse, have now been found in the Waterhouse papers at Countway Library, which clearly illustrate his intentions.

The first, addressed to "Dr. Benjamin Waterhouse, Cambridge near to Boston, New England, care of the Mentor Capt. Snow," was written in Birmingham, April 24, 1789. In addition to stating that he was too ill to travel to London, it contains the following:

Tell my dear Betsy, I will send her knives and forks as soon as I can, as also the elogium which I mislaid—I have a clock making for you, which I hope you will have this summer—I design it for a good one & it will go a twelve month with once winding up; so that if you have not bought, you will desist.

I have but just now heard of this opportunity so have only time to tell you all that I expect to write more fully soon—my love to you all correspondents, and to Betsy's mother—respects to all inquiring friends.

The second relevant letter from Oliver to Waterhouse, written from Birmingham on February 3, 1790, also contains information on the clock:

Yours of Nov. 8th and 20th mention the receipt [sic] of the clock—I was glad you were pleased with it; it will save you the trouble of winding once per week, & perhaps forgetting your task of winding—it takes but six feet to the floor from the top of the weights, after wound up—the device on the face I thought not amiss.

From these two letters, one can certainly deduce that Judge Oliver was a generous grandfather and grandfather-in-law, and enjoyed giving presents; that he was living in

Birmingham, was too ill to travel to London—indeed he died the year after the second letter was written, and therefore his presents most likely originated in or were bought in Birmingham; and that he was well informed regarding the clock, writing “I design it for a good one.” He knew its height and the scene painted on the dial, and thus undoubtedly had discussed it in person with a clockmaker in Birmingham, rather than having ordered it unseen from London, or from clockmakers in the United States. There were several clockmakers in Birmingham in the period, and R.J. Hetherington of the City Museum and Art Gallery of that city suggested in 1951 to Fitz that the firm of William and Caleb Nicholas may have made the clock.

Additional confirmation of the English origin of the Waterhouse clock, and also evidence of its role as a model for Locke’s and other Willard one-year tall-case versions, is to be found in several news items in the Boston press of the time, which were known to Fitz. At the library of the Massachusetts Historical Society in Boston, in the *Massachusetts Magazine* of May 1792, is the following item under the category of “Domestick Chronicle”:

A clock has been finished by an ingenious artist of Roxbury, of no more than the common height and size of an eight day clock, which will go a year with one winding up.

Simon Willard’s clockmaking shop was in Roxbury.

Also found at the Massachusetts History Society was a short letter on the front page of the *Columbian Centinel* of January 13, 1798, with a similar message:

Mr. Russell:
I observed in your last paper, high encomiums on an ingenious mechanic in Dedham. I doubt not his merit, and hope he will be rewarded and patronized. But we ought to remember that we have some

others who do the country equal credit, such as Mr. Pope, who made the Orrery, and Mr. Willard of Roxbury, who contrived a clock to run a whole year without winding up. These are specimens of ingenuity that ought to be remembered likewise (Jan. 10).

Justice

This letter brought the following rejoinder in the issue of January 17, 1798:

Mr. Russell,
I observed in your last papers, some little difficulty respecting determining the degree of credit which some of our ingenious mechanics merit, as it concerns the invention of certain pieces of machinery. One piece speaks of Mr. Willard of Roxbury ‘who contrived a clock, to run a whole year without once winding up’. Now the fact is, Mr. Willard, although a very ingenious artist, did not contrive that clock, but copied it from one in the possession of Doctor Waterhouse of Cambridge, which he imported a few years ago from England, which the Doctor permitted him to inspect for that purpose. It ought to be mentioned that Mr. Willard never pretended that he was the inventor, but always acknowledged [four words are indecipherable] he took it from. To have made such a one, after a few inspections, does credit to his ingenuity.

Fact

Dr. Waterhouse, of course, did not import the clock from England; it was sent to him from England as a gift, but otherwise “Fact” seems to have been well informed.

The sum of the evidence from Judge Peter Oliver’s two letters of 1789 and 1790 to Benjamin Waterhouse, and from the newspaper items of 1798 add up to a reasonable and convincing argument for the origin of the tall-case clock now ticking comfortably in a corner of the Faculty Room of the Harvard Medical School.

The clock was a present from Judge Peter Oliver to his new grandson-in-law, Benjamin Waterhouse; it was made, not by Simon Willard of

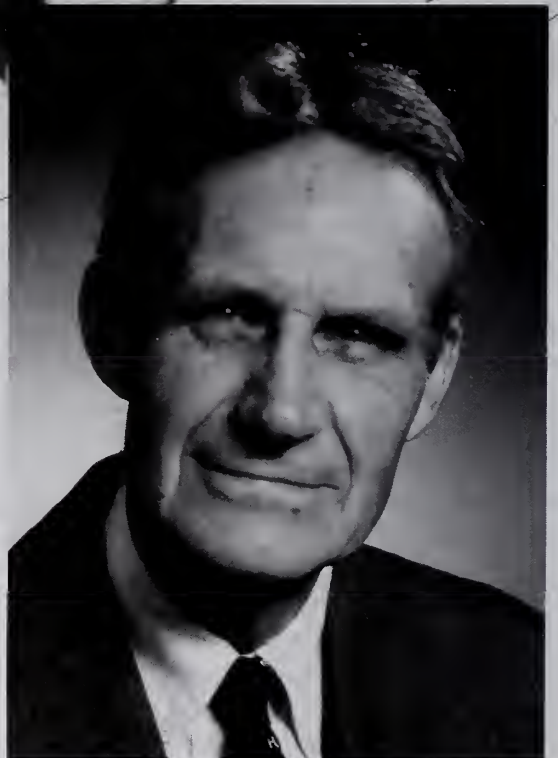
Roxbury, but by a clockmaker in Birmingham, England in the spring of 1789. It was shipped across the Atlantic, and was received by Waterhouse about the first week of November. It was set up in Waterhouse’s house in Cambridge, and being unusual and doubtless the only one in the Boston area so designed, came to the notice of and was soon seen by the talented clockmaker Simon Willard of nearby Roxbury.

Willard completed a copy first in 1792, and probably made only a few such reproductions, which, with the special feature of requiring winding only once a year, were decidedly expensive for the time. It appears that today, the former Locke Simon Willard tall-case clock, now owned by William Doyle, is the sole surviving example.

Today, when American antiques are often valued as investments, rather than being useful and a source of aesthetic enjoyment, clocks by Simon Willard are especially prized. While the Harvard Medical School’s Waterhouse clock is not a Willard clock, we now know that it was not only contemporary with those of Simon Willard, but was the very model upon which Willard’s own one-year tall-case clocks were patterned. Furthermore, it is distinctive for its remarkable documented history as a gift to Harvard’s first Hersey Professor, and by its continued service as a handsome and reliable timekeeper after a passage of more than 200 years.



Oglesby Paul ’42 is HMS professor of medicine emeritus, and Richard J. Wolfe is curator of Rare Books at Countway Library. The authors wish to thank Philip Cash for his assistance.



The Janeways in Iran

by Robert J. Haggerty and Frederick H. Lovejoy Jr.

THERE WAS NO "IRANGATE" PHILOSOPHY behind the Harvard-Iran project that began in the late 1950s. It was a totally altruistic effort on the part of a Harvard professor, Charles A.

Janeway, MD, to help Iran. With the crusading zeal of a missionary, Janeway, the Thomas Morgan Rotch Professor of Pediatrics at Harvard Medical School (1943 to 1974) and chief of medicine at Boston Children's Hospital, joined the effort to create a modern U.S.-style medical center in Shiraz, Iran. His only desire was to help a developing country achieve better health for its citizens by improving its medical education and medical care system.


Today, when there is so much criticism of the U.S. health care system, Janeway's faith in the power of modern medicine and medical science to improve health may seem naive to some. But in the 1950s, the promise of medical science's ability to contribute to improvement of the health of all the world's population was unchallenged in the West.

In addition, Janeway believed passionately in peace. At a time when the cold war was heating up, he spoke eloquently of the need for physicians to be advocates for peace. One road to peace was to improve the health of the

world's children, and for U.S. physicians to be good citizens of the world by helping less fortunate countries.

The story of Janeway's efforts to help Iran create a modern medical center needs telling, if for no other reason than to inspire a new generation of physicians and health science professionals. With the end of the cold war, we and our institutions can join international endeavors to promote peace through promoting health, and with the benefit of the knowledge and insight gained by pioneers such as Janeway, to meld science with culturally appropriate medical care.

The story begins with the Nemazee Hospital-Shiraz Medical Center, developed by another visionary, an Iranian businessman named Mohamed Nemazee. Nemazee's family had come from Shiraz, a city near Persepolis, the southern capital of Iran in antiquity. At the end of World War II, after he had lived in the West for several years, he was shocked on a return visit to Iran by the poverty and misery he saw there. Being a man of action, Nemazee established a modern waterworks and a hospital in his native city. As Torab Mehra, MD, original director of the medical center, notes, "At that time, no city in Iran had the benefit of properly treated, potable water."



Top
Moshen Ziai, MD and
nurses from Nemazee
Hospital.

Bottom
Charles A. Janeway,
1975.

While this water system was being built, "Mr. Nemazee dreamed another dream." His late father had established a hospital in Shiraz, but without an endowment it had become an ill-equipped, government-financed clinic. While he initially planned only to upgrade his father's hospital, "within two to three months, his unparalleled exuberance committed him to the expenditure of eventually over \$12 million to construct and equip a 250-bed general hospital using the latest standards prevailing in the U.S.," said Mehra.

In addition, he created a school of nursing to provide staff for the hospital. Both were located in a new, very beautiful and spacious campus called the Shiraz Medical Center. Nemazee planned to support the new hospital in part from revenues from the pure water supply that he piped to Shiraz from artesian wells. But the revenues from the waterworks, which he anticipated would cover 12 percent of the annual cost of running the hospital, turned out to cover only 2 percent, and were insufficient for hospital support.

In 1948, as the project was beginning, Nemazee organized the Iran Foundation in the United States "to serve as a watchdog and to oversee the project," according to Mehra. Janeway became a member of the medical council of the Iran Foundation in 1955, and in 1958 he was appointed president of the board of directors and chair of the medical advisory committee. He paid his first of four visits to Shiraz in 1955.

Claude Forkner '26, then chairman of the Iran Foundation, had explored with the Shah of Iran the possibility of establishing an American-type medical school in connection with the Nemazee Hospital. Medical education in Iran at that time was characterized by large classes in the French style and little basic science. The overcrowding in government hospitals meant that little clinical instruction occurred. Janeway and two other physicians were

Janeway learned quickly that it is difficult to transfer something as culturally dependent as American science and medical practice to another setting.

requested to visit the existing medical school and the new hospital in Shiraz and evaluate the medical education prospects of the project, which he did in 1956.

Janeway's anguish at leaving his lovely Annisquam summer home on one of many trips to Iran is expressed in his diary: "Why do I leave this smiling green prosperous free and friendly country for a land of deserts, heat and personal power struggles, pride and individualism? I suppose the answer is belief in the world, the brotherhood of man, and the deep conviction that freedom of opportunity and the four freedoms should be available to all, regardless of color, class, religion or nationality. Maybe this is something I can do to give a little shove toward peace!"

He was quickly made aware of the cultural gulf between the Middle East and the West while visiting the faculty at the American University at Beirut where, according to his diary, the Lebanese faculty were "discouraged, because so many people feel that if you do something for them you are not only foolish, but if it does not go right, it is your fault."

Upon arrival in Teheran, he was hosted by the prime minister and ambassadors from many countries, including the United States, at large

state dinners in sumptuous settings. At one of these dinners, hosted by the prime minister, he was startled when a guest asked "whether Harvard would be able to give them money for their hospitals and universities."

Janeway noted, "Philanthropy is not too well understood here. Income taxes are extremely low, and often not paid; and the standard of living for 5 percent of the Iranian population is certainly very high." While Harvard was not a source of money for the Iran project, it was contributing something far more valuable: the time, energy and commitment of one of its senior faculty; and, as will be noted later, education for the future leaders of the Nemazee-Shiraz Medical Center. Janeway did ultimately obtain considerable funds from foundation and U.S. government agencies, but not from Harvard.

Janeway learned quickly that it is difficult to transfer something as culturally dependent as American science and medical practice to another setting: "Iran is a complicated country. Politics weave their way in and out of every phase of life, from absentee landlordism in the rural villages to bribery in high circles."

At first, reading in his diaries of the parties and high life to which he and his wife were exposed on these trips, some might think they were on a pleasurable junket; but it is clear that he worked as hard there as at home. His wife, Betty, wrote in her diary, "Charlie is working hard all day and after parties at night reading, writing reports, etc." The long notes in her husband's diary document the many people he met with, and his lectures and the detailed reports to the Rockefeller Foundation, which supported his visits.

At the same time, their diaries note how distressed they were by the homeless people in the streets. (He would be equally distressed today by the homeless of our cities, we are sure.)

It is interesting today to note the modest cost of these consultations to

the Rockefeller Foundation. The foundation sponsored Janeway's six-month sabbatical trip, which included his first visit to Iran in 1956, for a total award of \$2,500! In 1961, the Rockefeller Foundation awarded \$10,000 to the University of Shiraz to help develop the basic sciences. The original plan was to build a U.S.-style total university, but the initial estimate of such a grandiose endeavor rose to \$60 million, with an annual estimated cost of \$12 million, which was to come from the Iranian government. This was vetoed, in part, because according to Mehra, "The Minister of Health was anti-American, since his son had not been admitted to Harvard."

Medical care in Iran in the mid-1950s was even more complex than today in the United States. The rich visited small but good private offices and clinics, while large university hospitals and public health clinics, together with a few missionary hospitals, provided the only care for the poor in the cities. In the rural areas, there was no medical care at all.

Betty Janeway's description of the British Mission Church and Hospital they visited on their 1956 trip demonstrates the contrast to the newly developed Nemazee Hospital. The chief surgeon at the British Mission Hospital "carefully explained to us that they were primarily missionaries and secondarily doctors. Nevertheless, he and an English lady doctor run an 89-bed hospital, do a thousand operations a year, teach medical students...as well as conduct prayers and spread the gospel."

In contrast to the Nemazee Hospital at that time, the missionary hospital's courtyards "were full of visiting women in chadors, and children." Mrs. Janeway goes on to describe the women who brought their beds with them and cooked food in the courtyard for the patients, their children.

The Nemazee Hospital, in contrast, was a beautiful oasis in a green garden looking out at barren mountains. But in 1956, of the 250 beds,

only 35 to 50 were open. Shortages of adequate nursing staff were the major cause of this bottleneck. In addition, patients were reluctant to use the Nemazee Hospital, perhaps because it was at first seen as an example of an alien American culture. In contrast to the mission hospital, at Nemazee Hospital there was a central dietitian service, which prevented families from cooking for their kin, and the atmosphere was one of "spit and polish."

The Nemazee waterworks, which provided an abundance of good water to the city of Shiraz, was located in the spacious hospital compound, but the other pipes led only to the homes in the "good" or new parts of town, and to some 35 water points in the poor sections. These latter taps were provided free to the poor, but bills sent to the rich for the service were rarely paid.

Janeway noted during his first visit that the situation was "complicated by trying to plant Western medicine and ethics in a foreign culture, where a few people are enormously wealthy and can pay more than it costs, but hate to, and vast numbers of people are in need but have practically no money."

The first steps to staff the hospital and medical school, using resources obtained from the International Cooperation Administration, employed 10 American professionals; the Ford Foundation equipped the Nemazee vocational school; and the hospital and school of nursing were expanded by fundraising from several other sources. Schools to train radiology and laboratory technicians, dieticians, and rehabilitation and physical therapists were created. Ultimately all this became part of the Shiraz Medical Center complex.

Janeway and the Medical Advisory Council were especially concerned to develop Iranian leadership for the project. But first they felt that they must establish a scientifically-based enterprise that would provide modern medical education. Therefore many of the first department heads were American

or British physicians and nurses. A pediatric resident from Children's Hospital in Boston, Campbell McMillan, became the first pediatrician at Nemazee Hospital. Monroe McIver '17, former chief of surgery at the Mary Imogene Basset Hospital in Cooperstown, New York, served as chief of surgery for a period. But it was Janeway's goal to replace them with equally well-trained Iranians. Thus extensive networks for recruitment of Iranian citizens who could be trained in modern scientific medicine were established.

Two of the first to be recruited were Torab Mehra and Mohsen Ziai. Mehra, a physician trained at the Johns Hopkins School of Public Health, became director of the center. Ziai became the first Iranian to head a department at Nemazee Hospital. Ziai was a graduate of the Johns Hopkins Medical School, with pediatric residency training at Johns Hopkins, Bellevue Hospital and at Boston Children's Hospital, where he served as chief medical resident, 1955 to 1956. This was followed by a fellowship in infectious diseases with Maxwell Finland at the Thorndike Laboratory.

Several distinguished Iranians who trained at Harvard Medical School or its affiliated hospitals returned to Shiraz for varying periods: Farrokh Saidi '54 (who is now chief of surgery at the Modarress Hospital in Tcheran); his sister, Parvin Saidi '56 (internal medicine at Robert Wood Johnson Medical School in New Jersey) Houshan Nosre (now practicing in California); and Ashraf Zadek, now at the Massachusetts Eye and Ear Infirmary. These are only a few of the many HMS connections with Shiraz Medical Center.

The Iran Foundation and Janeway also became intimately involved in the strategy and politics of creating a new medical school, or amalgamating the Nemazee Hospital with the old Shiraz Medical School. United States university politics are often said to be the

most vicious kind, but Janeway and the Iran Foundation learned that they are nothing compared to politics in Iran.

In the late 1950s, the Iran Foundation recommended that the Nemazee Hospital affiliate with the University of Shiraz Medical School, a French-style school with large classes. The Nemazee Hospital offered the only modern hospital facilities and laboratories, plus well-trained medical staff. The Foundation held to the principle that staff should be devoted full time to teaching and research, with research laboratories developed for faculty in both basic science and clinical medicine.

Janeway placed great emphasis on the importance both of the full-time system and laboratory science as the basis of a good medical education. But the attempt to transplant the system used in U.S. medical schools to the Iran of that time created a lot of rejection antibodies. For a time, the Iran Foundation considered establishing their own medical school, which would have prevented the rejection of the graft, but they did not have enough money to do it. And Janeway acknowledged that "turning our back on the

current Shiraz Medical School, which is less than half a mile away, and which does have governmental support," would be unwise.

Other solutions were proposed, such as providing clinical experience for students at the Nemazee Hospital "in much the same way as the Mary Imogene Bassett Hospital in Cooperstown has served as a teaching hospital for Columbia." But this solution had to be rejected because most of the students were too poorly prepared in basic science.

In the late 1960s, as Mehra stated, they eventually settled on a third solution as a first step: "affiliation of the hospital with the University of Shiraz through the preclinical sciences."

All of the preclinical chairs were at that point open in the medical school, and a number of good young Iranians, who might be appointed if they were offered the incentive of a joint appointment with Nemazee Hospital, were being trained in America.

After his visit in 1956, Janeway had noted that "talk of a new independent medical school is obviously premature (that is, based on the Nemazee Hospital) when a 250-bed hospital can

only operate at one-fifth of its capacity."

Why did Janeway have such an interest in international health? The origins of this commitment are not entirely clear. He had made trips to Europe as a young man with his mother and youngest sister, had majored in history and German as an undergraduate at Yale, and had been exposed to world leaders such as Henry Stimson, who summered at his family's place in the Adirondacks. It seems clear that he grew up with a world view.

He also spent summers while at Yale as a counselor at a camp for underprivileged children, demonstrating his early commitment to serve the disadvantaged. He then trained in medicine, becoming one of the first laboratory-oriented faculty members in internal medicine.

After medical school at Johns Hopkins (1930 to 1934), internship at Boston City Hospital (1934 to 1935), and residency at Johns Hopkins from 1935 to 1937, he returned to Boston City Hospital's Thorndike Laboratory. Soma Weiss then recruited Janeway to the new Peter



Nemazee Hospital,
Shiraz, Iran.

Bent Brigham Hospital as chief of infectious diseases. Janeway's early papers were on the new sulfonamides and the bases of their hypersensitivity reactions, demonstrated by careful animal as well as clinical research.

His son, Charles Janeway Jr. '65, now professor of pathology at Yale, a distinguished immunologist, and fourth generation Janeway physician, told of his father's reaction after moving from Johns Hopkins, "where everything was diagnosis," to the Boston City Hospital where, with Weiss—who had been trained in Germany—therapy was now the important issue. "That is why my father was so interested in infectious diseases, just as the sulfonamides were coming on the scene. Finally there was some effective therapy!"

After the premature death of Soma Weiss, Janeway became even more involved in issues of infectious diseases in children at the Boston Children's Hospital. This was followed by his appointment as the chief of medicine at Children's Hospital and Thomas Morgan Rotch Professor of Pediatrics at Harvard Medical School—in itself a remarkable appointment for a 35-year-old internist. Soon afterwards, in 1946, he demonstrated his world view when he made himself a leader of the first post-war meeting of the International Pediatric Association in New York.

Iran was a learning experience for Janeway. His belief in the virtues of scientific medicine became shaken as a result. All the pediatricians who served at Nemazee Hospital were frustrated by the fact that they could use modern medicine to cure children of their acute illnesses, such as diarrhea, pneumonia or meningitis, but when they sent them home to their villages, impure water, poor nutrition and exposure to many serious illnesses caused these same children to return again and again to the hospital for critical care. Janeway and other pediatricians exposed to this vicious cycle became enthusiasts for community development, pure water, diets ade-

His belief in the virtues of scientific medicine became shaken.

quate in protein and calories, preventive medicine, and primary care for early stages of acute disease. The Harvard professor learned as much from exposure to the Third World's problems as the Third World learned from him.

The Rockefeller Foundation files on the development of the university at Shiraz contain a large number of reports from Janeway, including repeated proposals for a medical school tied either to the university or to a modern teaching hospital such as the Nemazee. The Rockefeller Foundation was much less enthusiastic; one commentator noted that political disaster was going to come to Iran, accompanied by a great deal of anti-Americanism. If only the U.S. State Department could have had such prescience!

Janeway, ever the optimist, continued during his time as president of the Iran Foundation to urge that a modern university, a science-based medical school according to the then-current U.S. model, be established in Shiraz, Iran. On the other hand, his diaries indicate that he was impressed with the preventive services offered by some of the community-based public health clinics he saw. He refers often to the need for "potable water, adequate nutrition, family planning, and immunization" as the keys to the good health of the population.

Interestingly, Janeway's next foray into international health was to head the Harvard Cameroons Project in the 1970s. In directing this project, he placed first priority on building community health primary care centers as

the basis of teaching, patient care and research. But in the 1950s he was still a strong supporter of a modern, science-based teaching hospital as the place to train the leaders of medicine for Iran.

When Janeway returned to Iran in 1958, he noted that there had been a tremendous increase in material wealth since his first visit. In Teheran there was now "a magnificent airport, a great increase in the number of cars...people better dressed, stores filled with a wider variety of goods." Better still, "one can now drink water from the tap." But he recognized that the temptation to use the revenues from oil ("then \$200 million a year") for government operations rather than capital development for potable water, health care, education and industry, was a problem. A development plan had been outlined by a group from the U.S. Tennessee Valley Authority to achieve such infrastructural change.

Janeway noted that "the greatest intangible is the political situation, which seems superficially stable. Iran is now a benevolent dictatorship." He was worried more than about the army, which was large, with a pampered officer elite, than the fundamentalist Islamic religious leaders as a potential source of unrest.

In Shiraz in 1958, he noted that the medical school had "improved a great deal since my visit two years ago." Students were by that time beginning to be selected on aptitude, the basic science department had been strengthened by good young men, and Nemazee Hospital then had 129 beds open, operating at 80 percent occupancy, compared to only 35 beds two years before.

In 1958 he pointed out that Nemazee Hospital was at a turning point in its history. It could merge with the Shiraz Medical School and the affiliated educational institutions to become a true university; or it could go the route of the Mayo Clinic, providing the best medical care for as many paying patients as possible. But if the latter course was taken, he

He put his arm around my shoulder and said, "Bet on good young people."

believed that "many of the newly arrived, well-trained Iranian staff who wanted to teach and do research, would leave." The basic question of what was to be the objective of the Shiraz Medical Center was to be a major subject of the next meeting of the Iran Foundation. An interim solution was a loose affiliation between the two.

In a remarkable statement made in 1959 to Ward Darley, MD, then executive director of the Association of American Medical Colleges, Janeway outlined his educational philosophy in passionate tones. "Survival of democracy and freedom in the West depends to a large degree upon the success which the free nations can achieve in assisting the peoples of the less developed nations to raise their standards of living, of education and of health. This will require a greatly increased effort on the part of the United States, whether technical assistance is organized under national or international auspices. The success of such a program will stand or fall upon the adequacy and numbers, and particularly the quality, of the personnel involved."

He proposed that the AAMC organize a "public/private venture," with a broad-based group of young people from abroad in a variety of health disciplines, and also senior faculty nearing retirement—a pre-Kennedy type of international health peace corps.

His commitment to improving understanding among all peoples of the world, and his tenacious belief that the key to this goal was the personal commitment of able people, especially the young, was brought home to one

of the authors (RJH) when about to leave Harvard in 1980 to assume the presidency of a private foundation. At that time, Janeway was in the last stages of his terminal illness. After a dinner at his home, I asked him what he would do if he had the privilege of an open agenda in a foundation like the one I had just joined. After a long pause, which I attributed to his illness, he put his arm around my shoulder and said, "Bet on good young people."

The Iran Foundation and Janeway's Harvard-Iran project were based on betting on young people. The Nemazee-Shiraz Medical Center, with its medical school, is still operating today; and although the hospital has deteriorated and is under rural domination, it remains a beacon of excellent medical care. The current hostility between the United States and Iran will some day be eliminated, and the good young people recruited to that program will then emerge to lead their country again. "Bet on good young people." ❧

Robert J. Haggerty, MD is president of the William T. Grant Foundation in New York. He was a resident in medicine at Boston Children's Hospital from 1953-1955 (chief resident 1954-55), on the Harvard Medical School faculty at Children's Hospital from 1955-1964, and Roger I. Lee Professor of Health Services at the Harvard School of Public Health from 1975-1980. From 1964-1975 he was professor and chairman of the Department of Pediatrics at the University of Rochester School of Medicine and Dentistry.

Frederick H. Lovejoy Jr., MD is the HMS William Berenberg Professor of Pediatrics and associate physician-in-chief at Children's Hospital. He served as a resident and chief resident in medicine at the Boston Children's Hospital. Between 1974 and 1987 he was the director of the Massachusetts Poison Control System and from 1982 to 1987 the chief of the Clinical Pharmacology and Toxicology Division at Children's Hospital.

The authors, both pediatricians who

trained under Charles Janeway at the Children's Hospital of Boston, are collecting oral histories from Janeway's colleagues, and reviewing his papers and diaries with the goal of writing a biography of this pioneer immunologist, head of pediatrics at Boston Children's Hospital, and leader in international child health. They are deeply grateful for the collaboration of his wife, Elizabeth Bradley Janeway; his son, Charles Janeway Jr.; his colleagues; the Rockefeller Archives; and for personal notes from Mohsen Ziai, MD, chief of pediatrics at Fairfax Hospital in Virginia, from Campbell McMillan, MD, professor of pediatrics at the University of North Carolina, and from Torab Mehra, MD.

Harvard Medical Alumni Association
25 Shattuck Street
Boston, Massachusetts 02115
Address Correction Requested

Non-Profit Organization
U.S. Postage PAID
Permit No. 52420
Boston, MA